WORLD CLASS EDUCATION?

WHY NEW ZEALAND MUST STRENGTHEN ITS TEACHING PROFESSION

JOHN MORRIS
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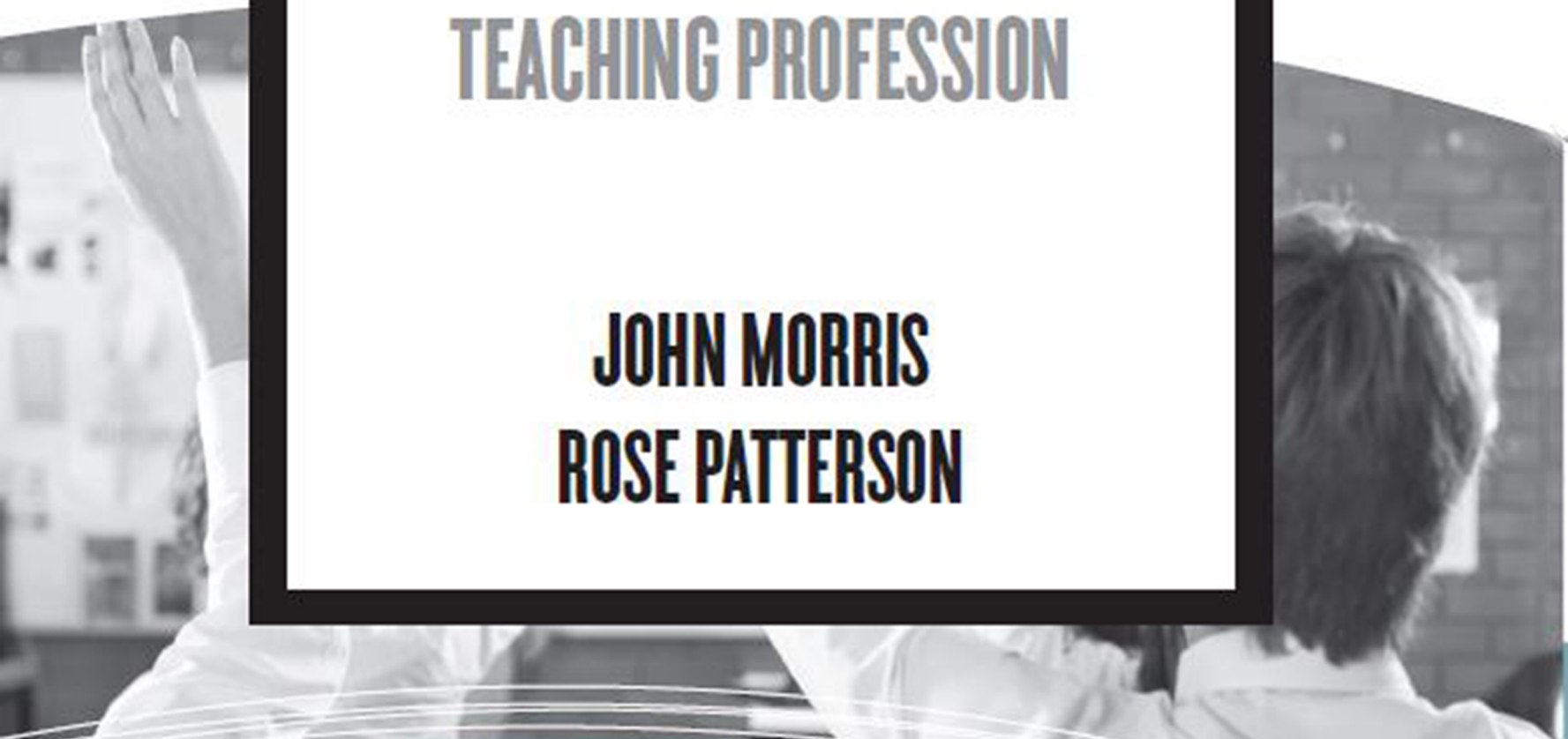

THE NEW ZEALAND INITIATIVE

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John Morris and Rose Patterson

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The New Zealand Initiative is an independent public policy think tank supported by chief executives of major New Zealand businesses. We believe in evidence-based policy and are committed to developing policies that work for all New Zealanders.

Our mission is to help build a better, stronger New Zealand. We are taking the initiative to promote a prosperous, free and fair society with a competitive, open and dynamic economy. We develop and contribute bold ideas that will have a profound, positive, long-term impact.

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Executive Summary

The greatest asset in New Zealand's education system is teachers. Teacher salaries make up the bulk of education spend, and teachers are the most important factor for student achievement and development.

Thus New Zealand must design policies that attract the best and brightest into the teaching profession, and design attractive career structures so that teachers can develop their full potential and so that the best teachers remain in the classroom.

New Zealand's education system is often heralded as world class and, indeed, our top students are doing extremely well in reading, mathematics, and science. Yet there is wide variation between the top and bottom students, and Māori, Pasifika and lower SES students are overrepresented in the lower end of the achievement spectrum. Primary school students are way behind their international counterparts in the three core subjects, and there are particular concerns around poor performance in mathematics. Some researchers argue that low expectations of students are partly to blame for poor achievement.

Improving the performance of the schooling system has concerned governments and educationists around the world for the last 50 years. The plethora of educational reforms, each intended to be the 'silver bullet', have exhausted teachers and yielded very little progress. No education system is better than its teachers yet these reforms have failed to respect teachers as trusted professionals and partners in reform. Furthermore, key policy areas that influence who becomes a teacher and how teachers are developed professionally have been largely ignored.

Effective teachers must have strong subject knowledge, knowledge and skills in teaching that subject matter (pedagogical knowledge), the personal qualities required for developing children and young people, and a passion for teaching. While it is difficult to measure the quality of the teaching workforce, experience dictates that New Zealand has some excellent teachers, but too many ineffective teachers.

While New Zealand's teaching profession is highly qualified - 86% have at least bachelor's degrees - teachers are not necessarily qualified in the subjects that they teach and this is particularly concerning in the area of mathematics where research shows a clear link between teachers' and students' mathematics ability. New Zealand has a lack of qualified mathematics teachers:

- 20% of schools say that a lack of mathematics teachers hinders the ability to provide instruction.
- One-third of year 9 students' mathematics teachers do not have a mathematics qualification.
- 19% of teacher vacancies are in mathematics.

Three organisations in New Zealand have huge potential power to strengthen the quality of the teaching profession. The New Zealand Teachers Council (NZTC), the body that regulates the profession, is currently undergoing reform to better fulfil its obligations.

The other two organisations with the power to make change are the primary teachers union, NZEI, and the secondary teachers union, PPTA. There is great

potential for government to work with unions as essential partners in education reform, yet a 2006 report found that teachers felt a lack of respect from government with imposed changes and lack of consultation. On the other side, these organisations have a reputation for being defenders of the status quo and for being confrontational in their approach to change. This works against teachers in that it enhances low public perceptions of teachers. A more mature approach is needed on both sides.

There has been rhetoric of late that New Zealand faces an oversupply of teachers yet data confirms that beginning teachers are very much in demand. Schools try to balance out their ageing teacher workforce by appointing talented, enthusiastic and innovative beginning teachers. However, only 57% of schools reported satisfaction with the graduates they employ. The lack of practical experience may contribute to this; most teacher education now occurs in university settings, ensuring that teachers have the higher-order thinking skills required for the demands of 21st century teaching, yet a lack of practical in-school training time for teachers is being felt by schools. There is also momentum building for offering different routes into teaching for people with practical real-world experience, who don't wish to pursue the somewhat restrictive and expensive pathway of further training to become a teacher.

These issues of attracting the best and brightest into the teaching profession will become more important as the ageing workforce begins to move into retirement. Now is the right time to introduce measures to increase the attractiveness of the profession to ensure a high-quality pool of teacher candidates to select from. Teaching is becoming a more complex and demanding career requiring people of intellect and resilience. Despite this, teaching is not a high status career in New Zealand, and a 2008 OECD report found that the requirements of the job acted as a major deterrent to attracting the right people into teaching.

New Zealand is well regarded internationally for its induction and mentoring programmes which are available for the first two years of teaching. However, there is considerable disparity in the quality and accessibility of these programmes across schools. Induction and mentoring is much more likely to be successful if implemented as part of a wider system of appraisal, development and career opportunities, an area that is majorly lacking in New Zealand.

A 2010 OECD review of New Zealand education found teacher appraisal to be insufficient and variable, and additional research by Claire Sinnema found that appraisal was rarely linked to student learning. Professional development (PLD) for teachers too is rarely linked to student achievement and there has been very little scrutiny as to whether PLD leads to improved student learning. In recognition of this, the Ministry of Education is presently developing a new contestable model of PLD provision and a system for evaluating PLD against student achievement.

The main issue in enhancing the quality of the teaching profession is that effective classroom teachers are not sufficiently rewarded for their hard work. Teachers automatically progress up a step-lock pay scale and after eight years reach the top of that scale. There is little recognition for

excellent teachers to stay in the classroom or mentor other teachers in their professional growth. A more aspirational career structure is needed.

Having a quality teacher in every classroom is the key to achieving excellence and equity in New Zealand education. This report highlights concerns but also a great number of positives; New Zealand still ranks highly in the international education league tables. However, continuous improvement won't happen without quality teachers.

Strengthening the teaching workforce and creating a culture within the profession of continuous improvement of practice is urgently required. Success in this endeavour will signal to the top graduates coming out of university that "teaching is a job that smart people do... [because] we need people who are drawn to the profession not because it is easy, but because it is hard…" (Dylan Wiliam)

Contents

List of Figures, Tables and Boxes

List of abbreviations

ERO	Education Review Office
ITE	Initial Teacher Education
MoE	Ministry of Education
NCEA	National Certificate of Educational Achievement
NZCER	New Zealand Council for Educational Research
NZEI	New Zealand Educational Institute
NZQA	New Zealand Qualifications Authority
NZSTA	New Zealand School Trustees Association
NZTC	New Zealand Teachers Council
OECD	Organisation for Economic Cooperation and Development
OFSTED	Office for Standards in Education
PIRLS	Progress in International Reading Literacy Study
PISA	Programme for International Student Assessment
PLD	Professional Learning and Development
PPTA	Post Primary Teachers' Association
PRT	Provisionally Registered Teacher
SCT	Specialist Classroom Teacher
TIMSS	Trends in International Mathematics and Science Study
UNESCO	United Nations Educational, Scientific and Cultural Organisation

Foreword

The quality of an education system cannot exceed the quality of its teachers (McKinsey & Company, 2007)[1]

Teachers, the greatest resource in New Zealand schools, have the largest in-school impact on student learning, far outweighing that of any education programme or policy. A 2012 report by the Economist Intelligence Unit agrees: "The single most important input variable [in education] is the quality of teaching".[2]

From an economic point of view, teacher salaries comprise a large chunk of school expenditure, accounting for about 61% of government spending on state schools in New Zealand.[3] Given this significant taxpayer contribution to education, improving the quality of teachers and teaching should be a central goal of education policy. Education is an investment in our children's futures and the prosperity and wellbeing of all New Zealanders.

According to a 1998 report from ERO, "the quality of teachers employed in schools is crucial to the effectiveness of New Zealand's education".[4] Thus, it is vital to ensure the right people enter the teaching profession – those who are highly qualified, dedicated and motivated, and have the disposition to teach and work with children and young people.

Successive governments have long recognised the importance of raising educational outcomes of New Zealand students and have pursued an array of initiatives to achieve this: changed governance structures, new assessment methodologies, revised curricula, different teaching strategies, different learning styles of students, and so on.

Recent research internationally has shown that structural and organisational reforms make only a marginal difference to lifting student achievement. The reality is that most of these reforms have been ineffective because, as Dylan Wiliam comments, "We have been looking in the wrong places for answers".[5] He notes that:

> It is not class size that makes the difference, nor is it the presence or absence of setting by ability … the only thing that really matters is the quality of the teacher.[6]

The increased international and national focus on the quality of teaching has largely arisen from the OECD's PISA study, which compares the performance of 15-year-olds in mathematics, science and reading. The PISA study began in 2000 and has been conducted four times since. The 2012 results will be available in December 2013. Along with a growing public realisation that teachers are the most important in-school influence on student outcomes, the PISA study has put teaching in the limelight.

Although there are some exemplary teachers in New Zealand, there are also major concerns about teacher competence. As early as the 1990s, a controversial ERO study reported "significant numbers of incompetent teachers in New Zealand".[7] ERO was strongly criticised for such a controversial comment and the agency was asked to substantiate the claim. The then Minister

1 Barber, M., & Mourshed, M. (2007). *How the world's best-performing school systems come out on top.* McKinsey & Company, p. 13

2 Kielstra, P. (2012). *The Learning Curve – Lessons in Country Performance in Education.* Pearson, p. 22

3 According to a 2010 report by the Education Workforce Advisory Group, teacher salaries cost $3.4 billion, and total government revenue for state and state-integrated schools in 2010 was $5.6 billion

4 Education Review Office. (1998). *The Capable Teacher.* Wellington, p. 3

5 Wiliam, D. (2012). *Teacher quality: Why it matters, and how to get more of it*, p. 3

6 Ibid, p. 3

7 Bourgogne, P., & Troup, R. (2011). Quality Educators. *Educational International,* p. 42

8 Fitzsimons, P. (1997). The Governance of Teacher Competency Standards in New Zealand. *Australian Journal of Teacher Education*, p. 7

9 Kane, R., & Mallon, M. (2006). *Perceptions of Teachers and Teaching.* Wellington: Ministry of Education

10 Hanushek, E. (1992). The Trade-off between Child Quantity and Quality. *The Journal of Political Economy*

of Education entered the debate stating that the actual number of incompetent teachers could not be quantified "because there is no clear definition of a competent teacher".[8]

In 2006, a report by Ruth Kane and Mary Mallon reported high levels of negative opinion about teachers in New Zealand within the teaching workforce itself, frustration with the variable quality of graduates of teacher education, and dissatisfaction with current teacher training.[9]

Research overseas shows a wide variety in the quality of teachers.[10] [11] An OECD report concluded: "There is also substantial evidence that teachers vary markedly in their effectiveness".[12] Kane and Mallon too found vast disparities in perceptions of teacher quality in New Zealand.[13]

The variability of teacher quality clearly affects student learning and achievement. One study found that the outcome for students with poor teachers compared to students with good teachers can be as much as a full year's difference in achievement.[14]

Andrew Leigh analysed Queensland's numeracy test results in years 3, 5 and 7 from 2001 to 2004 and estimated teacher effects on the gains made by students. Even with conservative estimates, he found the quality of teachers to have significant impacts – a student with a higher quality teacher could achieve in three-quarters of a year what a student with a less effective teacher could achieve in a full year.[15] A 2007 study found that higher quality teachers put mathematics performance ahead by one-fifth of a school year.[16]

Summarising international research on the relationship between teacher quality and student performance, New Zealand researcher Adrienne Alton-Lee found that "up to 59% of variance in student performance is attributable to difference between teachers and classes".[17]

While the important role of the teacher in student achievement may seem obvious today, it was not always the case. The widespread view until the mid-1960s was that schools and teachers made almost no difference to student achievement; rather, student achievement was perceived to be largely determined by socioeconomic status, family circumstances, and innate ability.[18] Fortunately, these beliefs are changing. As New Zealand Professor John Hattie, an expert on teacher quality says: "It is what teachers know, do and care about which is very powerful in this learning equation".[19]

Teachers should be seen as the most powerful driver in lifting students' performance. Yet recent research reflects declining morale in the profession, as evidenced by Kane and Mallon's 2006 study in particular.

Kane and Mallon found that the major issues for morale were workload associated with change, and feeling misunderstood and undervalued by the public. Given the raft of recent changes in education in New Zealand (National Standards being particularly contentious among teachers), the negativity in the media about teachers, and the Novopay debacle,[20] it is safe to say that the situation has not improved since Kane and Mallon's 2006 report. In fact, in a survey conducted by NZCER in 2012, only 57% of secondary school teachers reported having good or very good morale compared with 70% in 2009.[21]

Kane and Mallon's 2006 study also found that New Zealand teachers were discouraging senior students from choosing teaching as a career, and that students too perceived their teachers to be overworked, underpaid and negative about their profession. This raises serious concerns about attracting the very best and brightest into teaching.

[11] Hanushek, E., Kain, J., O'Brien, D., & Rivkin, S. (2005). *The Market for Teacher Quality.* Stanford Institute for Economic Policy Research. Stanford University

[12] OECD. (2005). *Teachers Matter: Attracting, Developing and Retaining Effective Teachers*, p. 12

[13] Kane, R., & Mallon, M. (2006). *Perceptions of Teachers and Teaching.* Wellington: Ministry of Education

[14] Hanushek, E. (1992). The Trade-off between Child Quantity and Quality. *The Journal of Political Economy*

[15] Leigh, A. (2010). Estimating Teacher Effectiveness from Two-year Changes in Students' Test Scores. *Economics of Education Review*

[16] Aaronson, D., Barrow, L., & Sander, W. (2007). Teachers and Student Achievement in the Chicago Public High Schools. *Journal of Labor Economics*

[17] Alton-Lee, A. (2003). *Quality Teaching for Diverse Students in Schooling: Best Evidence Synthesis.* Wellington: Ministry of Education, p. v

[18] Coleman, J. (1966). *Equality of Educational Opportunity.* U.S. Department of Health, Education and Welfare, Office of Education

[19] Hattie, J. (2003). Teachers Make a Difference: What is the Research Evidence? *Australian Council for Education Research Annual Conference.* Melbourne

What to expect in this report

This is the first in a series of three reports on education in New Zealand to be published by The New Zealand Initiative. It investigates the main issues that have an impact on the teaching profession. It will also cover New Zealand students' performance in international tests, international attempts to raise student achievement, teaching in the 21st century, and the characteristics of a good teacher.

This report recognises, as the PPTA rightly point out, that "teachers' work is highly contextualised and their ability to provide quality teaching depends on many factors".[22] In other words, the system should be geared towards enabling teachers to be their very best for them to have a greater impact on students' lives and learning.

The analysis relies on desk-based research and interviews with field practitioners, leading academics, education researchers, representatives of teaching organisations, and officials from various government agencies such as the MoE, NZTC, and ERO.

The second report in this series will focus on eight jurisdictions of six developed countries that have handled similar issues associated with improving teacher quality and student achievement. These countries are Australia, England, Canada (Ontario and Alberta) Finland, Germany (Bavaria and Bremen), and Singapore.

The final report will draw on the two earlier reports. It will compare the policies in New Zealand with other countries, particularly those policies that should be avoided or adapted here. The report will recommend policies that Government should adopt to ensure New Zealand's teaching quality is the best among other high-performing educational systems.

These reports are timely with changing demographics affecting the teaching profession in a major way. The vast cohort of teachers who started teaching in the late 1960s and 1970s are retiring and "whoever enters teaching and however they approach their work, will shape the profession and what it is able to achieve with our children for the next thirty years".[23]

It is our belief that teachers must regain their place among society's most respected intellectuals and it is on this premise that our research is based.

[20] Novopay is the Ministry of Education's national pay roll service for teachers. Rolled out in 2012, the problems with the system resulting in many teachers not being paid sparked intense public scrutiny and a Ministerial Inquiry.

[21] Wylie, C. (2012). *Secondary Schools in 2012: Main findings from the NZCER National Survey.* Wellington: New Zealand Council for Education Research

[22] New Zealand Post Primary Teachers' Association. (2012). *Quality Teaching for Excellence and Equity.* Wellington, p. 4

[23] Hargreaves, A. (2002). Teaching in a Knowledge Society. *Vision 2020 online conference*, p. 2

1.

The performance of New Zealand's school system

New Zealand cannot claim to have a world class education system while a significant part of our population is under-served.
(Hekia Parata, Minister of Education).[24]

New Zealand is not entitled to call ourselves world class while our education system continues to underperform for Māori and Pasifika learners.
(Lesley Longstone, former Education Secretary).[25]

John Minto from the Quality Public Education Coalition said Ms Longstone's claim is a nasty untruth and called for her resignation.[26] "To say that New Zealand's education system isn't world class is absolute misinformation."
(Ian Leckie, former president of NZEI).[27]

These quotes illustrate the disagreements within the New Zealand education system about its performance. This chapter puts together comparable international data to assess the performance of New Zealand students.

The Programme for International Student Assessment (PISA)

PISA, run by the OECD, is the most cited study of internationally comparable student achievement, measuring 15-year-olds performance in reading, mathematics and science. New Zealand's 2009 performance is shown in figure one. PISA is recognised as testing not only knowledge but also the application of that knowledge (solving novel problems).

The top performers are exceptional

At first glance, New Zealand's 15-year-olds are doing well compared with other OECD countries, but a closer examination of the data[28] reveals the story is not that simple.

1. **Reading:** New Zealand is on par with Singapore in having the largest proportion of students performing at the very top level of the reading scale (3%). New Zealand is equal with Singapore after Shanghai in the proportion of students considered top-performing readers – the two top levels of the scale (16%).

[24] Parata, H. (2012/13). *Letters of Expectation.* Minister of Education

[25] Ministry of Education. (2012). *Annual Report - Foreword from the Secretary for Education.* Wellington: Ministry of Education

[26] Minto, J. 30 October 2012. *Waikato Times*

[27] Garrett-Walker, H., & Shuttleworth, K. 30 October 2012. Sides taken on education standards. *The New Zealand Herald*

[28] Telford, M. (2010). *PISA 2009: Our 21st Century Learners at Age 15.* Wellington: Ministry of Education

Figure 1: International ranking of 15-year-olds

	Reading – overall		Mathematics		Science	
1	China: Shanghai	556	China: Shanghai	448	China: Shanghai	575
2	Korea	539	Singapore	562	Finland	554
3	Finland	536	Hong Kong	555	Hong Kong	549
4	Hong Kong	533	Korea	546	Singapore	542
5	Singapore	526	Chinese Taipei	543	Japan	539
6	Canada	524	Finland	541	Korea	538
7	**New Zealand**	**521**	Liechtenstein	536	**New Zealand**	**532**
8	Japan	520	Switzerland	534	Canada	529
9	Australia	515	Japan	529	Estonia	528
10	Netherlands	508	Canada	527	Australia	527
11	Belgium	506	Netherlands	526	Netherlands	522
12	Norway	503	China: Macao	525	Chinese Taipei	520
13	Estonia	501	**New Zealand**	**519**	Liechtenstein	520
14	Switzerland	501	Belgium	515	Germany	520
15	Iceland	500	Australia	514	Switzerland	517
16	Poland	500	Germany	513	United Kingdom	514
17	United States	500	Estonia	512	Slovenia	512
18	Liechtenstein	499	Iceland	507	China: Macao	511
19	Germany	497	Denmark	503	Poland	508
20	Sweden	497	Slovenia	501	Ireland	508
21	France	496	Norway	498	Belgium	507
22	Ireland	496	France	497	Hungary	503
23	Chinese Taipei	495	Slovak Republic	497	United States	502
					PISA average	**501**
24	Denmark	495	Austria	496	Norway	500
			PISA average	**496**		
25	Hungary	494	Poland	495	Czech Republic	500
26	United Kingdom	494	Sweden	494	Denmark	499
	PISA average	**493**				
27	Portugal	489	Czech Republic	493	France	498
28	China: Macao	487	United Kingdom	492	Iceland	496
29	Italy	486	Hungary	490	Sweden	495
30	Latvia	484	Luxembourg	489	Austria	494

Source: OECD (2010). PISA 2009 Results: What Students Know and Can Do – Student Performance in Reading, Mathematics and Science (Volume 1).

2. **Science:** New Zealand ranks equally with Singapore after Shanghai in the proportion of students at the very top end of the science scale (4%). New Zealand students place fourth after Shanghai, Singapore and Finland in the top-performing science students – the top two levels of the science scale (18%).

3. **Mathematics:** Although one in five New Zealand students (19%) were considered top performers on the mathematics scale, the percentage is well behind other countries.

Large variation between top and bottom readers

The 2009 New Zealand PISA report[29] does not specify the variations between the top and bottom scores in science and mathematics. However, the report does provide an analysis of the variation in reading scores.

Among the eight high-performing countries, New Zealand had the widest range of reading scores between the 5th and 95th percentiles, and the widest range of scores between the 25th and 75th percentiles. Only three other countries in the OECD had a greater range of reading scores between the 25th and 75th percentiles.

The report notes that some of the variation in reading ability was due to the success of high-performing students in New Zealand.

The 2009 PISA data shows vast disparities in reading, mathematics and science by ethnicity, as shown in table one.

There were no significant improvements or decline in any of the comparable measures in mathematics, science or reading among 15-year-olds in all the four PISA studies so far.

Progress in International Reading Literacy Study (PIRLS)

Three PIRLS studies of year 5 students comparing reading literacy around the world have been conducted so far. Results for 2010-11[30] showed that in New Zealand:

1. Year 5 students placed 23rd internationally on average reading performance.
2. Year 5 students were more likely to be advanced readers (14%) compared with the international average (8%) and were among the top 10 countries in this category.

[29] Ibid

[30] Chamberlain, M. (2013). *PIRLS 2010/11 in New Zealand: An Overview of National Findings from the Third Cycle of the Progress in International Reading Study (PIRLS).* Ministry of Education. Wellington

Table 1. Mean PISA scores by ethnicity

	NZ European	Asian	Māori	Pasifika
Reading	541	522	478	448
Mathematics	537	529	476	446
Science	555	530	487	448

Source: Telford, M. (2010). PISA 2009: *Our 21st Century Learners At Age 15.* Wellington: Ministry of Education.

3. There were no differences by ethnicity in reading ability.
4. There were no changes in reading scores from 2001 to 2005 to 2010.

Trends in International Mathematics and Science Study (TIMSS)

The TIMSS study of years 5 and 9 students' ability in mathematics and science has been conducted five times in New Zealand since 1994–95. Science results for 2010-11[31] [32] were as follows:

1. Year 5 students placed 31st internationally, while year 9 students placed 15th.
2. About one quarter (28%) of year 5 students were high performers, lower than the international median (32%). Similarly for year 9 students, about a third (34%) were high performers, higher than the international mean (21%).
3. Among year 5 students, New Zealand European students tended to have higher performance, and Māori and Pasifika lower. Among year 9 students, Asian and New Zealand European, and 'Other' students performed highest, followed by Māori and then Pasifika.
4. For year 5 students, science scores improved steadily from 1994 to 2002, and then declined in 2006 and 2011 to 1994 scores. For year 9 students, scores remained fairly steady from 1994 to 2010.

Mathematics results for 2010-11[33] [34] were as follows:

1. Year 5 students placed 32nd internationally and year 9 students placed 16th.
2. Among year 5 students, about a quarter (23%) were high performers, just below the international median (28%). Similarly, about a quarter (24%) of year 9 students were high performers, greater than the international median (17%).
3. Among year 5 students, Asian and New Zealand European students tended to have higher performance than Māori and Pasifika students. Among year 9 students, Asian students performed more highly than New Zealand European, Māori and Pasifika students.
4. Among year 5 students, scores improved steadily from 1994 to 1998 to 2002, and then declined in 2006 and 2011. Among year 9 students, there has been a downwards trend in in scores since 1994, although this is not statistically significant.

Concern with mathematics performance

The TIMSS study shows that mathematics performance is particularly poor among primary school students in New Zealand. Although scores improved till 2002, performance has declined markedly since then.

The TIMSS and PISA studies of science ability indicate that by mid-secondary school, New Zealand students catch up in reading and science compared to other countries but not in mathematics.

[31] Caygill, R., Kirkham, S., & Marshall, N. (2013). TIMSS 2010/11: Year 5 Students' Science Achievement. Wellington: Ministry of Education

[32] Caygill, R., Kirkham, S., & Marshall, N. (2013). TIMSS 2010/2011: Year 9 Students' Science Achievement. Wellington: Ministry of Education

[33] Caygill, R., Kirkham, S., & Marshall, N. (2013). TIMSS 2010/11: Year 5 Students' Mathematics Achievement. Wellington: Ministry of Education

[34] Caygill, R., Kirkham, S., & Marshall, S. (2013). TIMSS 2010/11: Year 9 Students' Mathematics Achievement. Wellington: Ministry of Education

[35] Laxon, A. (2013, March 16). Poor new mathematics figures start with teachers: expert. The New Zealand Herald

[36] Laxon, A. (2013, February 23). Government eyes back to basics in mathematics. The New Zealand Herald

[37] Ibid

The Minister of Education Hekia Parata has described the TIMSS mathematics result as "extremely concerning".[35] The coordinator of the TIMSS test in New Zealand, Bob Garden, blames it on the years of inaction by successive governments and the education bureaucracy in the teaching of mathematics, particularly in primary schools.[36]

Peter Hughes, mathematics education lecturer at University of Auckland, says:

> Probably a third of primary school students are not numerate when they reach secondary school and are very unlikely to catch up [and] the real elephant in the room is that many primary teachers are not confident at teaching mathematics.[37]

The figures bear this claim. The TIMSS study found that only 63% of year 5 teachers were very confident teaching mathematics, compared to an international average of 75%.[38] However, secondary school teachers (of year 9 students) were on par with teachers internationally in reported confidence. About three-quarters (73%) of New Zealand secondary school teachers and international secondary school teachers (76%) were very confident.[39]

Year 9 students in science had higher scores (for their age) than year 5 students, and 15-year-olds had relatively higher places on the science tables in the PISA study. Interestingly, primary school teachers' confidence in teaching science is exceptionally low. Only 26% of year 5 teachers (primary) said they felt very confident to teach science[40] compared to 80% of year 9 (secondary) teachers.[41] This perhaps isn't surprising given that year 5 students ranked 31st and year 9 students ranked 15th internationally.

Educational inequality

These international tests show that New Zealand has one of the widest gaps in educational performance. Research commissioned recently by the PPTA found a 20 percentage point gap between the level of achievement of Māori and Pasifika students and non-Māori and Pasifika students in New Zealand.[42] In addition, New Zealand has the highest gap on PISA's social gradient approach. Some researchers attribute this partly to strong performance at the higher end of the scale and high levels of income inequality.[43] However, there is an alternative explanation for these disparities, as outlined below.

Māori and Pasifika students are also less likely to gain school qualifications. Māori and Pasifika candidates for NCEA at all three levels and for University Entrance were consistently less successful than European and Asian candidates. For example, in 2010, 61% of Māori and 52% of Pasifika candidates gained NCEA Level 3 compared to 79% for NZ European and 78% for Asian candidates.

New Zealand has an extremely high degree of inequality in its education system. The bottom 20% are the least mobile[44] and the education system does not correct for socioeconomic status as effectively as other countries.[45] This is an injustice in and of itself, and no doubt greater public resources will have to be directed to many of these students later in life to deal with consequent crime, unemployment, and social problems.

Although socioeconomic background and other factors explain some of the variations in performance, it doesn't explain everything. Part of the solution lies in assisting parents to understand that their children can learn and succeed. The other part is overcoming the "bigotry of low expectations", a major impediment

[38] Caygill, R., Kirkham, S., & Marshall, N. (2013). TIMSS 2010/11: Year 5 Students' Mathematics Achievement. Wellington: Ministry of Education

[39] Caygill, R., Kirkham, S., & Marshall, S. (2013). TIMSS 2010/11: Year 9 Students' Mathematics Achievement. Wellington: Ministry of Education

[40] Caygill, R., Kirkham, S., & Marshall, N. (2013). TIMSS 2010/11: Year 5 Students' Science Achievement. Wellington: Ministry of Education

[41] Caygill, R., Kirkham, S., & Marshall, N. (2013). TIMSS 2010/2011: Year 9 Students' Science Achievement. Wellington: Ministry of Education

[42] Gordon, L. (2013). Who achieves what in secondary schooling? A conceptual and empirical analysis. Wellington: New Zealand Post Primary Teachers' Association

[43] Shuttleworth, K. (2013, July 8). Student failure claims inaccurate and simplistic - PPTA. The New Zealand Herald

[44] Hattie, J. (2003). New Zealand Education Snapshot: With specific reference to the Yrs 1-13 Years. Knowledge Wave: The leadership forum: Auckland

[45] OECD. (2010). *PISA 2009 Results: Overcoming Social Background - Equity in Learning Opportunities and Outcomes (Volume III)*

Box 1: Government programmes to achieve priority outcomes in schooling

- In February 2010, the Government introduced national standards for primary and intermediate schools to lift student achievement by clarifying what students should achieve and by when in reading, writing and mathematics in the first eight years at school. Schools are implementing these national standards despite widespread doubts about whether the standards will lead to any substantial improvement, and concerns that it is not possible to moderate the standards.
- The Government's Youth Guarantee Initiative introduced in August 2009 targets school-leavers to encourage them to remain engaged in education and achieve Level 2 NCEA, seen as the minimum qualification for success in today's world. Since 2012, the initiative has offered up to 7,500 fee-free tertiary places, and will cost $329 million over four years.
- Improving Māori performance is being addressed with leadership, language and training programmes, and support initiatives across all education sectors. The Te Kotahitanga professional development programme operates in 49 schools involving 3,000 teachers and 17,000 students. It recognises the importance of teachers' face-to-face relationships with their students, and their role in transforming educational outcomes for Māori.
- The Government is introducing improvements to systems and structures for Māori language schools. The 2011 Budget provided $20 million in new funding for Māori education.

to Māori achievement. The research of Adrienne Alton-Lee, Russell Bishop and Mere Berryman theorises that most teachers subscribe either consciously or sub-consciously to a deficit-theory explanation for low Māori achievement (this theory also applies to a lesser degree to Pasifika students). That is, low expectations of Māori students are a self-fulfilling prophecy.

Despite throwing more money at the problem and introducing a plethora of education initiatives for the last 15 years, recent PISA data shows that achievement levels have not improved. John Hattie back in 2003 argued that the bottom 20% of New Zealand students was not improving despite these measures.[46]

These international test results show that:

> The top 80% of our students are very competitive and performing at world class standards, while the bottom 20% are falling backwards – like no other country in the Western world. We thus can consider the glass 80% full, or 20% empty (John Hattie).[47]

The achievements of our top students suggest that although there is excellence in the school system, the variations between ethnicities, between schools, and within schools are challenges that New Zealand needs to face urgently.

[46] Hattie, J. (2003). New Zealand Education Snapshot: With specific reference to the Yrs 1-13 Years. *Knowledge Wave: The leadership forum*. Auckland

[47] Ibid, p. 2

2.

Global Education Reform 1960-2012

The education reforms of the late 20th Century were largely unsuccessful because they failed to address head-on the dominant variable in the education system: teacher quality.

(Dylan Wiliam, Emeritus Professor of Educational Assessment – Institute of Education).[48]

Education is undoubtedly the key agent of change in the knowledge society. Improving student achievement is the ultimate goal for education systems worldwide. This chapter provides a brief historical context of educational reform over the last 50 years.

Over this time, schools have been plagued by innovations and fads that were supposed to be the "silver bullet" that would lead to excellence and equity for all. Teachers, as a consequence, have become exhausted by having to follow top-down changes while being ignored as an integral part of education reform programmes

> The depressing reality is that the net effect of the vast majority of these measures on student achievement has been close to, if not actually, zero (Dylan Wiliam).[49]

The 1960s and 70s: The impact of progressivism

The 1960s was an important decade for sharpening thinking about teaching and learning. Until then, schooling was characterised by an authoritarian relationship between schools and students. There was a major emphasis on discipline, little attempt to differentiate curricula, and pressure on non-performing students to leave school.[50] In a context of protest and massive social change, there followed a period of questioning of all things traditional.

Education did not miss out on this questioning and the era of progressivism took hold, with schools showing an increasing responsiveness to students. Established school organisational practices were questioned, curricula and testing became student-centred, and social concerns and teaching values became part of the curriculum.

However, this nostalgic recall "also comes with a gloss that conceals inherent flaws …" (John MacBeath, former Emeritus Professor – University of Cambridge).[51]

[48] Wiliam, D. (2012). Teacher quality: Why it matters, and how to get more of it

[49] Ibid, p. 2

[50] Dinham, S. (2008). *How To Get Your School Moving and Improving.* ACER Press

[51] MacBeath, J. (2012). *Future of Teaching Profession.* Education International Research Institute, p. 38

Box 2: Nostalgia for the 1960s and 1970s

From time to time, teachers with more than four or five decades of teaching experience look back with nostalgia at education in the 1960s and 1970s. Remember when:

- The classroom was the teacher's domain and no one interfered with the teacher's autonomy and professional judgment.
- There were opportunities for spontaneity and following children's interests.
- The teaching day finished mid- or late afternoon and it was rare to take work home.
- Teaching was relaxed and classrooms were creative places.
- Teachers were respected professionals.
- Parents supported teachers' judgments and sanctions.
- Education was valued in its own right rather than for the economy or individual gain.

Source: MacBeath, J. (2012). Future of Teaching Profession. Education International Research Institute.

> [It was an era with] too many incoherent or non-existent curriculums, too many eccentric and unevaluated teaching methods, too much of the totally soft-centred belief that children would learn if you left them to it
> — David Bell, former Chief Inspector of Schools for England.[52]

By the 70s it became increasingly clear that the progressive ideas of this period – open plan schools, flexible timetabling and team teaching – and the reform movement itself had yielded miniscule improvements.[53]

The other major problem was a belief that schools made little difference to student achievement because student achievement was determined by heredity, address, socioeconomic background, and family. This belief was largely influenced by the 1966 Coleman report, *Equality of Educational Opportunity*[54] and is still evident in the bigotry of low expectations.

The "Effective Schools" movement: 1980s to today

With the 1980s began the return to a tougher, less tolerant era of accountability and standardisation in schooling as significant disparities in attainment between countries, between schools within countries, and between children within the same school became apparent.

The school effectiveness movement developed a 'tool box' of criteria to enable low performing schools to adopt the successful characteristics of more effective schools. For the next 30 years, researchers searched for a science "robust enough to explain and predict outcomes."[55]

[52] Smithers, R. (2004, October 6). Teaching in 1960s crackers, says inspector. *The Guardian.* London, England

[53] Fullan, M. (2009). Large-scale reform comes of age. *Times Education Supplement Journal of Educational Change,* 101-113

[54] Coleman, J. (1966). *Equality of Educational Opportunity.* U.S. Department of Health, Education and Welfare, Office of Education

[55] MacBeath, J. (2012). *Future of Teaching Profession.* Education International Research Institute, p. 41

In the United Kingdom, this recognition that schools did make a difference was sparked by a study by Michael Rutter (Professor of Child Psychiatry, UCL) called *Fifteen Thousand Hours*, which concluded:

> It does matter which school a child attends. Moreover the results provide strong indications of what are the particular features of school organisation and functioning which make for success.[56]

Not all researchers were convinced about the 'tool box' strategy. Researcher Andres Sandoval-Hernandez believed that "a one-size-fits-all solution cannot be used to improve school performance" because of the differences between schools in the causes of poor performance, capacity for change, and contextual characteristics.[57]

Despite these concerns, what has been coined the Global Education Reform Movement (GERM) by Finnish Educator Pasi Sahlberg[58] took hold in the later decades of the 20th century and the first decade of the 21st century in most OECD countries.

The major characteristics of this reform agenda were standardising teaching and learning through common measures, increasing focus on core subjects, particularly literacy and numeracy, prescribing curriculum, transferring models of administration from the corporate world, and introducing high-stakes accountability policies.[59]

England was the first country in the world, in the 1990s, to use an explicit theory of large-scale change as a basis for introducing systemic reform. With the strategic support of Sir Michael Barber (Chief Education Strategist, Pearson), the then Prime Minister Tony Blair introduced the National Literacy and Numeracy Strategy.

[56] Beare, H. (2001). *Creating the Future's Schools*. London and New York: Routledge Falmer

[57] Sandoval Hernandez, A. (2008). School effectiveness research: a review of criticisms and some proposals to address them. *Education, Special Issue*, p. 36

[58] Sahlberg, P. (2011). *Finnish Lessons*. New York: Teachers College Press

[59] Ibid

Figure 2. Rutters tool box:

1. Lessons work oriented
2. Teachers worked and planned together
3. Formal reward systems, public commendation, immediate feedback to students
4. Students expected to take responsibility for their learning
5. Homework set and followed up
6. Emphasise academic performance and hard work
7. Good atmosphere and ethos

Source: Rutter, M. (1982). *Fifteen Thousand Hours: Secondary Schools and Their Effects on Children.* Harvard University Press.

Michael Barber characterised the strategy of action behind the programme as "high challenge-high support" in relation to six key elements:

1. ambitious standards
2. good data and clear targets
3. devolved responsibility
4. access to best practice and quality professional development
5. accountability
6. intervention in inverse proportion to success.

In England, initial results for this programme were impressive but the "top down strategy failed to capture the hearts and minds of school heads and teachers … and results plateaued for 2000, 2001 and 2002."[60]

The exceptional country: Finland

One standout exception to the widespread adoption of these policies was Finland. Pasi Sahlberg, Finnish educator and scholar, believes that the success of the Finnish system is due to adopting alternative policies to the Western "GERM" model. The Finnish education system and its relevance to New Zealand will be discussed in detail in the second report of this series, with a brief description below in the context of educational reform.

The success of alternative policies in Finland is very much related to societal factors, including the overwhelming demographic homogeneity of the country (97% of Finland's population is Finnish).

However, homogeneity alone cannot account for Finland's extraordinary transformation into an educational 'superpower' over the last 40 years. As Sahlberg has said, the Finnish reform emphasis focused on more collaboration and less competition; more personalisation and less standardisation; more responsibility and trust and less accountability and control; more pedagogy and less technology, and more professionalism and less bureaucracy.[61] These five forces have been the key to Finnish success since the early 1990s.

The temptation to use the Finnish model as the 'silver bullet' to improve teaching and student outcomes should be thoroughly scrutinised before acting on it. Educational systems are complex, and constructional practices and reform methodologies in one country may not be easily transferable to another. The second report in this series will provide further detail on the Finnish education system and its relevance to New Zealand. Sahlberg himself warned against copycat reforms:

> I am not suggesting that other nations should adopt the Finnish education system or even its elements … sensitivity to the problems of transferring educational ideas from one place to another is essential.[62]

A criticism of Sahlberg's attempt to categorise the Finnish way versus the Western way is that it has created false dichotomies. Education reform could be a hybrid rather than one exclusive way.

For example, research does not support the view that systems which ensure high literacy and numeracy standards do so at the expense of creativity, thinking and individuality. Schools that do well in the basics also do well in providing a broad, rich curriculum.[63]

[60] Fullan, M. (2009). Large-scale reform comes of age. *Times Education Supplement Journal of Educational Change,* p. 105

[61] Henshaw, P. (2012, May 24). The five lessons we can learn from Finland. *SecEd*

[62] Sahlberg, P. (2011). *Finnish Lessons.* New York: Teachers College Press, p. 134

[63] Dinham, S. (2008). *How To Get Your School Moving and Improving.* ACER Press

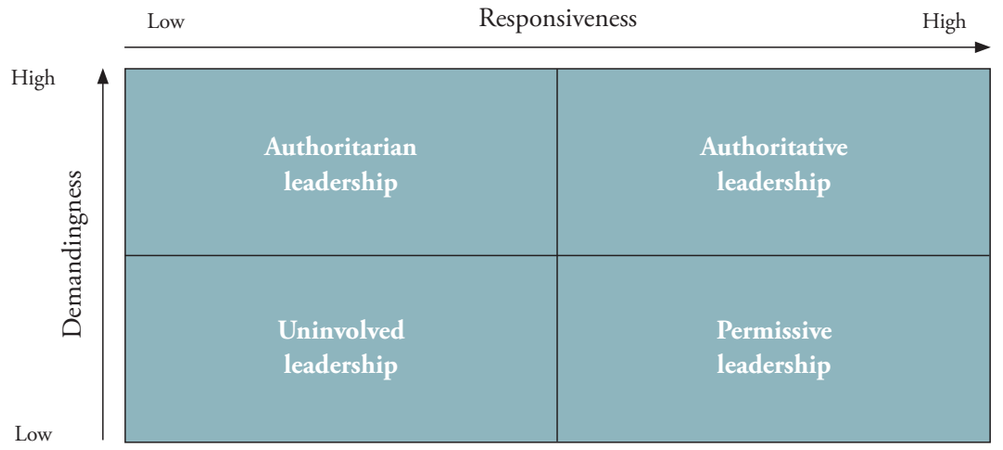
Table 2: Comparing global and Finnish features in education

Global Education Reform Movement (GERM)	Alternative Reform Movement (ARM) Finland
Strict standards	**Loose standards**
Setting clear, high centrally prescribed performance standards for all schools, teachers and students to improve the quality and equity of outcomes.	Setting clear but flexible national framework for school-based curriculum planning. Encouraging local solutions to national goals in order to find best ways to create optimal learning opportunities for all.
Focus on literacy and numeracy	**Focus on broad and deep learning**
Basic knowledge and skills in reading, writing, mathematics and the natural sciences serve as prime targets of education reform.	Teaching and learning focus on deep, broad learning, giving equal value to all aspects of the growth of an individual's personality, moral character, creativity, knowledge and skills.
Teaching for predetermined results	**Encouraging risk-taking and creativity**
Reaching higher standards as criterion for success and good performance; minimises educational risk-taking; narrows teaching to content and use of methods beneficial to attaining preset results.	School-based and teacher-owned curricula facilitate finding novel approaches to teaching and learning; hence, encourages risk-taking and uncertainty in leadership, teaching and learning.
Transferring external innovations for educational revolutions	**Learning from the past and respecting pedagogical conservatism**
Sources of education change are external innovations brought to schools and teachers through legislation or national programmes. These often replace existing improvement strategies.	Teaching honours traditional pedagogical values, such as teacher's role and relationship with students. Main sources of school improvement are proven good practices from the past.
Test-based accountability	**Responsibility and trust**
School performance and raising student achievement are closely tied to processes of promotion, inspection and ultimately rewarding schools and teachers. Winners normally gain fiscal rewards whereas struggling schools and individuals are punished.	Gradual Building of a culture of responsibility and trust within the education system that values teacher and principal professionalism in judging what is best for students and in reporting their learning progress. Targeting resources and support to schools and students who are at risk to fail or to be left behind.

Source: Sahlberg P., (2009, April). A Short History of Educational reform in Finland.

Figure 3: Demandingness versus responsiveness

Four prototypes of leadership (Dinham & Scott, after Baumrind)



Source: Dinham, 2008, p 68.

False dichotomies and polarities

It is too easy to say the reform movements dominating the West, the alternative policies of the Finnish system, the progressive movement of the 1960s and 1970s, or the schools effectiveness movement are the way to go. Such dichotomies are far too simplistic.

So how did these deeply divisive dichotomies come about? Professor Stephen Dinham (University of Melbourne) proposed a reasonably disturbing argument about the effects of the education reforms of the 1960s when experiments with educational reform began. He believes the reforms of this era have had serious repercussions today: "Ideologically it was thought that any increase in responsiveness towards students … required a decrease in demandingness."[64] In other words, schooling became more permissive and affected standards, behaviour, expectations, teaching methods and curricula.

The ideology went so far the other way that a false dichotomy was created which "reflected the polarisation of ideologies in education".[65] This polarisation centred on the following debates:

- knowledge versus skills
- process versus content
- competition versus collaboration
- progressivism versus conservatism
- subjects versus themes
- 'guide by the side' versus 'sage on the stage'.

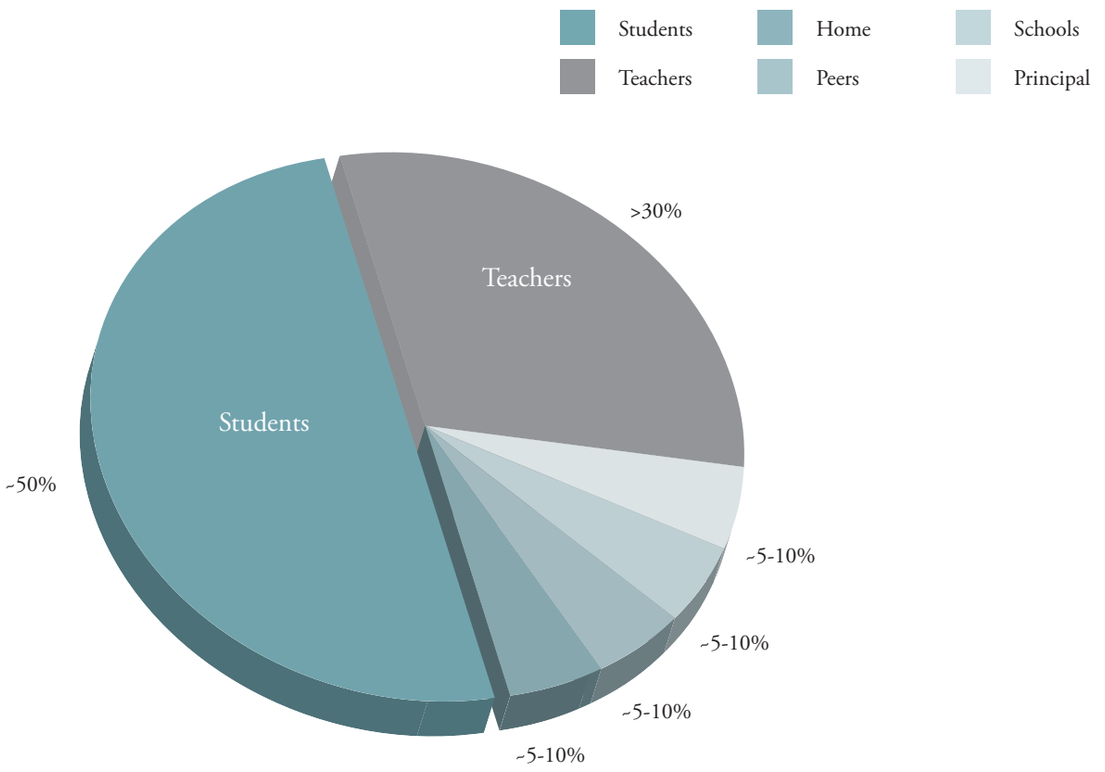
Dinham believes the pendulum swung too far in the 'permissive' direction, and was responsible for many of the problems seen in schools today such as student disengagement, behavioural issues, teacher role conflict, de-professionalisation of teaching and lowered status, antipathy towards teacher-directed classrooms, overuse of discovery and inquiry-based

[64] Ibid, p. 74

[65] Ibid, p. 74

Figure 4: Key influences on student achievement

Hattie's Meta-Analytic Research



Source: Hattie, (2003). Teachers Make a Difference: What is the Research Evidence?

learning (where children direct their own learning), overemphasis on student self-esteem, relevance of learning, and fear of competition.

These dichotomies are false because "the best teachers, educational leaders and schools today exhibit both high demandingness and high responsiveness; that is the relationship between schools, teachers, leaders and students is authoritative."[66] It need not be exclusively one or the other (see Figure 3).

Features of successful educational reform

It is unwise to endorse one factor at a time as the key to improving student attainment. Successful system reform usually involves a small number of powerful factors interacting to produce a substantial impact. Four key elements were responsible for Finland's recent success:

- an inspiring country vision
- a high quality teaching profession
- supportive working conditions
- professional trust.[67]

[66] Ibid, p. 75

[67] Hargreaves, A., & Shirley, D. (2009). *The Fourth Way: The Inspiring Future for Educational Change*. Thousand Oaks, California: Corwin Press

Box 3: Teachers matter

A UK study worked out that if the lowest performing 10% of teachers were brought up to the average, in 5 years' time the UK's rank among OECD countries would improve from 21st in reading to as high as 7th, and from 22nd in mathematics to 12th.[71]

The effects of high quality teaching are especially significant for students from disadvantaged backgrounds. Over a school year, these students gain 1.5 years' worth of learning with very effective teachers but 0.5 years with poorly performing teachers.[72]

Another study found that students assigned high performing mathematics teachers for three years in a row achieved scores 50 percentile points higher than students who started with comparable mathematics scores but were assigned to low performing teachers.[73]

A 2007 study found that with a very effective mathematics teacher for one year, students learned 40% more than with a poorly performing mathematics teacher.[74]

Teachers matter

> The performance of a school system rests on the quality of its teachers (Fenton Whelan, Professor Emeritus, University of Toronto).[69]
>
> The most important factor affecting student learning is the teacher… more can be done to improve education by improving the effectiveness of teachers than by any other single factor (Wright, Horn & Sanders, 1997).[70]

In its 2007 general examination of the characteristics of the top performing education systems in the world, McKinsey & Company identified four big factors common to all successful large-scale educational reform:

- attracting high quality people to the teaching profession
- a focus on, and strategies for, developing quality instructional practices
- cultivating, selecting and developing instructionally oriented leaders
- continuing data-based attention to how well individual students, schools and sets of schools are doing, with early intervention to address any problems.[68]

Although there is no one factor, these common features all relate directly to the quality of the teaching profession.

Recent research is unanimous that teachers matter greatly. Students with quality teachers do better, with a marked effect on social and economic outcomes (see Box 3).

Hattie has analysed the key influences on student outcomes in New Zealand and overseas. Figure four shows the relative importance of these influences.

[68] Barber, M., & Mourshed, M. (2007). *How the world's best-performing school systems come out on top.* McKinsey & Company

[69] Whelan, F. (2009). *Lessons learned: how good policies produce better schools,* p. 52

[70] Wright, S. P., Horn, S. P., & Sanders, W. L. (1997). Teacher and classroom context effects on student achievement: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education,* 57-67

[71] The Sutton Trust. (2011). *Improving the impact of teachers on pupil achievement in the UK - interim findings*

[72] Ibid, p. 2

[73] Sanders, W., & Rivers, J. (1996). *Cumulative and Residual Effects of Teachers on Future Student Academic Achievement.* University of Tennessee Value-Added Research and Assessment Center

[74] Aaronson, D., Barrow, L., & Sanders, W. (2007). Teachers and Student Achievement in the Chicago Public High Schools. *Journal of Labor Economics*

Apart from the ability and motivation of the students themselves, the teacher makes the most difference. It has been a flaw in the education reforms of the late 20th century that all the effort went into structural reform and new curriculum and assessment methodologies while the teacher was ignored.

The world's highest performing education systems have the following features in common:

- A focus on the things that are known to matter in the classroom – a relentless, practical focus on learning.
- The creation of a strong culture of teacher education, research, collaboration, mentoring, feedback and sustained PLD.
- Seeing the role of teachers as essential and an integral part - as partners - in the reform process.

Improving the effectiveness of teachers has proved conclusively to be the most valuable lever for system-wide improvements in student outcomes.

3.

Teaching in the 21st Century

More varied careers are likely to become the norm in all fields of work and teaching will need to adapt to accommodate that trend…
(Education and Skills Select Committee Report, UK, 2004).[75]

Teaching in the knowledge society … requires qualities of personal and intellectual maturity that take years to develop. (Andy Hargreaves, Researcher).[76]

An OECD study *Teachers Matter*[77] makes the point that teachers now and in the future will be expected to have much broader roles. Teachers will need to be involved in the intellectual development of students and the learning processes in the classroom, developing the entire school as a 'learning community' and developing connections with the local community and wider world.

> Teaching for the knowledge society involves cultivating special capacities, not just any kind of learning in young people. These include developing deep cognitive learning, creativity and ingenuity among pupils; drawing on research, working in networks and teams and pursuing continuous professional learning as teachers; and promoting problem-solving, risk-taking, trust in fellow professions (whether they are close to you, or always agree with you or not), ability to cope with change and commitment to continuous improvement as organisations. (Andy Hargreaves)[78]

It is clear that the knowledge and information revolutions are having a profound impact upon schooling. Traditional notions of nation, community, work, citizenship and family are all changing, which means today's young people will grow up to live and work in fundamentally different ways to their parents. Concomitantly, the work of teachers, the process of schooling, the preparation of new entrants to the profession, as well as the on-going development of those already in the profession are all changing.

In the midst of all this change, teachers have been charged with providing their students a foundation for life. Their work involves:

- Adopting issues related to increasing ethnic diversity and the impact of new technologies and new economies.
- Helping students develop knowledge and skills for the new economy and lifelong learning.
- Providing intellectual challenges for all students.

[75] Education and Skills Select Committee, Fifth Report. (2004). *Secondary Education: Teacher Retention and Recruitment,* p. 37

[76] Hargreaves, A. (2002). Teaching in a Knowledge Society. *Vision 2020 online conference*

[77] OECD. (2005). *Teachers Matter: Attracting, Developing and Retaining Effective Teachers.* OECD Publishing

[78] Hargreaves, A. (2003). *Teaching in the Knowledge Society: Education in the Age of Insecurity.* New York: Teachers College Press

- Being successful with a wide range of learners.
- Helping students develop the ability to think critically, to be creative, to solve complex problems, and to master complex subject matter.
- Achieving the same predetermined goals for every student regardless of their different learning needs.
- Providing a safe and supportive classroom environment.[79]

As Andy Hargreaves puts it:

> Teaching in the knowledge society … requires qualities of personal and intellectual maturity that take years to develop. Teaching in the knowledge society cannot be a refuge for second-choice careers, a low level system of technical delivery or, as some policymakers are saying, an exhausting job that can be handled mainly by the young and energetic before they move onto something else. Teaching in a knowledge society, rather, should be a career of first choice, a job for grown-up intellectuals, a long-term commitment, a social mission, a job for life.[80]

Teaching has traditionally been a job for life but this doesn't have to be the case, nor is it necessary that people who have 'burnt out' in one career should stay in that career. Equally, people from other careers who want to teach should be able to do so.

Schools and thus teachers are caught in major social and cultural changes that are not only technical, scientific and commercial but also involve changes in population mixes, family patterns, uses of leisure time, and access by students and teachers alike to resources and experience on a global scale. A report to the Australian Teacher Quality and Educational Leadership Taskforce concluded that:

> Not least of these changes are affirmations of the rights of citizens and challenges to the authority of established figures and institutions – not least teachers and schools.[81]

All this makes teaching a challenging and complex profession that requires intelligence and understanding beyond what the general public may appreciate. It is also a profession that must be open to change in selecting entrants, ITE, teachers' continuing PLD, the image of teaching as a worthwhile career, and the quality of teaching and its value for students' learning. The report stated that:

> The river of change does not stop and requires constant effort for its navigators, whether in the single classroom or at the highest levels of policy and planning.[82]

New Zealand is not immune from these significant changes and given the changing nature of teaching as a career there is a role for the MoE, a revamped NZTC, and the teacher unions to promote a career in teaching, and as Kane and Mallon stated in 2006, not necessarily "as an end in itself but as a springboard to other potential careers and other positions in a wide range of careers."[83] On the one hand, teaching expertise takes years to develop, but on the other hand, it need not be a career for life.

There is also an urgent need for these various agencies to collaborate and establish a career structure that adequately recognises and promotes good teaching, while taking into account future changes in teaching.

[79] Skilbeck, M., & Connell, H. (2004). *Teachers for the Future: The Changing Nature of Society and Related Issues for the Teaching Workforce.* Australia: Ministerial Council for Education, Employment, Training and Youth Affairs, p. 16-19

[80] Hargreaves, A. (2003). *Teaching in the Knowledge Society: Education in the Age of Insecurity.* New York: Teachers College Press

[81] Skilbeck, M., & Connell, H. (2004). *Teachers for the Future: The Changing Nature of Society and Related Issues for the Teaching Workforce.* Australia: Ministerial Council for Education, Employment, Training and Youth Affairs, p. 17

[82] Ibid, p. 17

[83] Kane, R. G., & Mallon, M. (2006). *Perceptions of Teachers and Teaching.* Wellington: Ministry of Education, p. xv

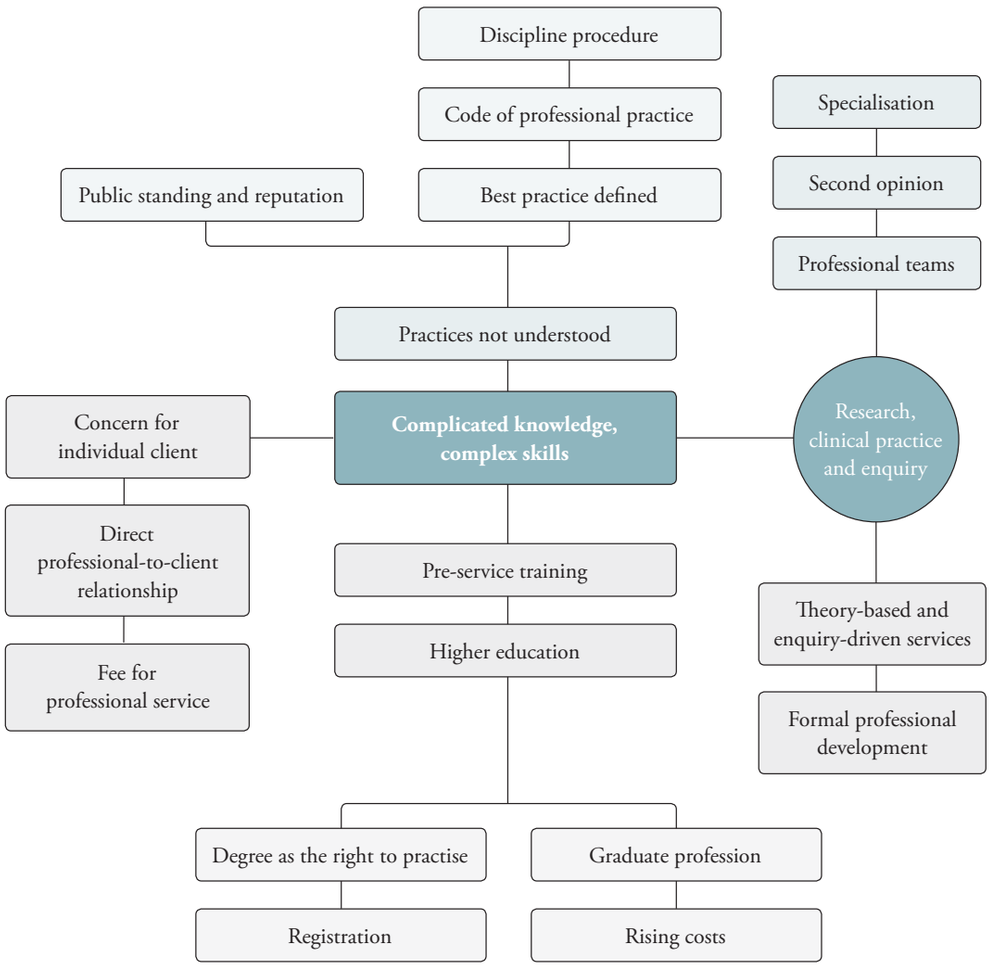
4.

Teaching as a Profession

Professionalism is a status conferred by the public … it is a status which comes from being earned and deserved.

(Hedley Beare, Educator and Author)[84]

Figure 5: The characteristics of a profession



Source: T Buzan, *The Mind Map Book* (1993) in (Beare, 2001, p. 176).

> Professionalism is a status conferred by the public…it is a status which comes from being earned and deserved (the late Hedley Beare, Educator and Author)

Over the years, several research studies have been conducted and treatises written on what constitutes a profession. The Australian Council of Professions defines a profession as:

> A disciplined group of individuals who adhere to ethical standards and who hold themselves out as, and are accepted by the public as, possessing special knowledge and skills in a widely recognised body of learning derived from research, education and training at a high level, and who are prepared to apply this knowledge and exercise these skills in the interest of others.[85]

John MacBeath in his paper on the *Future of Teaching Profession* (sic) provides a set of criteria for determining if teaching is a true profession. (See Box 4).

Worldwide, there is a transition to considering teaching as a profession rather than as a trade or a craft. Table three shows the occupational changes and work practices accompanying this shift.

To accelerate this transition to teaching as an evidence-based profession in which teachers act as researchers in their classrooms, teachers need:

- critical appraisal skills (e.g. finding, evaluating, summarising, and using research results in the literature and in the classroom)
- a high level of reasoning, critical thinking, reflective decision-making, and desire to improve
- an awareness of variability in learning/teaching situations
- a keenness to seek more efficient and effective teaching strategies.

One of the most important determinants of a profession is whether it is perceived as such by the public. If so, the profession becomes more attractive and selective, and encourages better-qualified and more highly skilled people to enter it.

[84] Beare, H. (2001). *Creating the Future's Schools.* London and New York: RoutledgeFalmer, p. 172

[85] Beaton, G. (2010). *Why professionalism is still relevant.* Canberra: Professions Australia.

Box 4: Criteria of professionalism

1. **Theoretical knowledge and concomitant skills:** Professionals are assumed to have extensive theoretical knowledge and, deriving from that, skills used in practice.
2. **High quality pre-service academic and professional preparation:** Professions usually require at least three years' academic accreditation plus professional induction, together with a requirement to demonstrate professional competence in the workplace.
3. **Legal recognition and professional closure:** Professions tend to exclude those who have not met their requirements nor joined the appropriate professional body.
4. **Induction:** A period of induction and a trainee role is a prerequisite to being recognised as a full member of a professional body with continual upgrading of skills through professional development.
5. **Professional association:** Professions usually have professional bodies organised by their members to enhance their status with controlled entrance requirements and membership.
6. **Work autonomy:** Professionals retain control over their work and theoretical knowledge.
7. **Code of professional conduct or ethics:** Professional bodies usually have codes of conduct or ethics for their members and disciplinary procedures for those who infringe the rules.
8. **Self-regulation:** Professional bodies are self-regulating and independent of government.
9. **Public service and altruism:** Services provided are for the public good and altruistic.
10. **Authority and legitimacy:** Professions have clear legal authority over some activities but also add legitimacy to a wide range of related activities.
11. **Inaccessible and indeterminacy body of knowledge:** The body of professional skills are relatively inaccessible to the uninitiated.
12. **Mobility:** Skills, knowledge and authority belong to professionals as individuals, not the organisations for which they work. When these professionals move, they take their talents with them. Standardising professional training and procedures enhances such mobility.

Source: MacBeath, J. (2012). Future of Teaching Profession. Education International Research Institute.

Table 3: The transition from a trade to a profession

From	To
Standardised pratice	Personalised, non-standard service
Awards and conditions	Professional flexibility
Wages and salaries	Fee for professional service
Certificated; tradesman's ticke	Degree
Technical-college-trained	University educated
Only pre-service training mandatory	Career-long professional development
'Competencies' base	Ongoing research moves skill base
Skill-driven	Theory-driven
Registration	Professional codes of practice
Technical gradations	Professional specialisations
'Full-time employment'	Contracts and projects; 'portfolio careers'
Employer/employee paradigm	Loyalty to one's professional field
Government regulation	Self-regulation and international transferability

Source: Beare, (2001). Creating The Future Schools. London and New York. Routledge Falmer. p. 178.

5.

The International Status of Teaching

The McKinsey & Company report *Closing the Talent Gap* found that most top-tier university graduates saw teaching as unattractive "in terms of the quality of the people in the field, professional growth and compensation".[86]

Of the top third of US university students, only 9% planned to teach. The decisive factor in choosing another career over teaching was financial. Only 13% said there would be financial rewards for doing well in teaching compared with 75% for their chosen career. The most attractive attributes for their chosen career were quality of co-workers, prestige and a challenging work environment.[87]

The link between lower status and failure to attract top-tier graduates is a major issue for the profession now and in the future. The report stated that:

> In our education system research and work in more than 50 countries, we have never seen an education system achieve or sustain world-class status without top talent in its teaching profession.[88]

It is fair to say that teaching generally has never had the status of professions such as medicine or law. While teaching may be a noble profession, the public, especially undergraduates, professionals and management, still sees it as "on a par with social work and nursing rather than medicine, engineering or the law".[89]

June Purvis in 1973 proposed some reasons why teaching has a relatively low status: the public has much more contact with teachers than any other group of professionals, so the job lacks the glamour and mystique of the 'heart surgeon or the lawyer in court'. Teacher qualifications are lower than for other professions, and there is a public perception that teaching is for those who don't know what else to do. She also thought long holidays for teachers did not help with the misconception that the job is easy. By and large these reasons are still valid.[90]

A study by Leicester and Cambridge University on the status of teaching in the United Kingdom surveyed two panels: teachers, and associated groups (board members, parents, and teaching assistants). Teachers surveyed felt the profession was not well rewarded or respected and was too highly controlled. This perception was mirrored by those who came into regular contact with teachers.[91]

[86] Auguste, B., Kihn, P., & Miller, M. (2010). *Closing the talent gap: Attracting and Retaining Top-Third Graduates to Careers in Teaching.* McKinsey & Company, p. 6

[87] Ibid

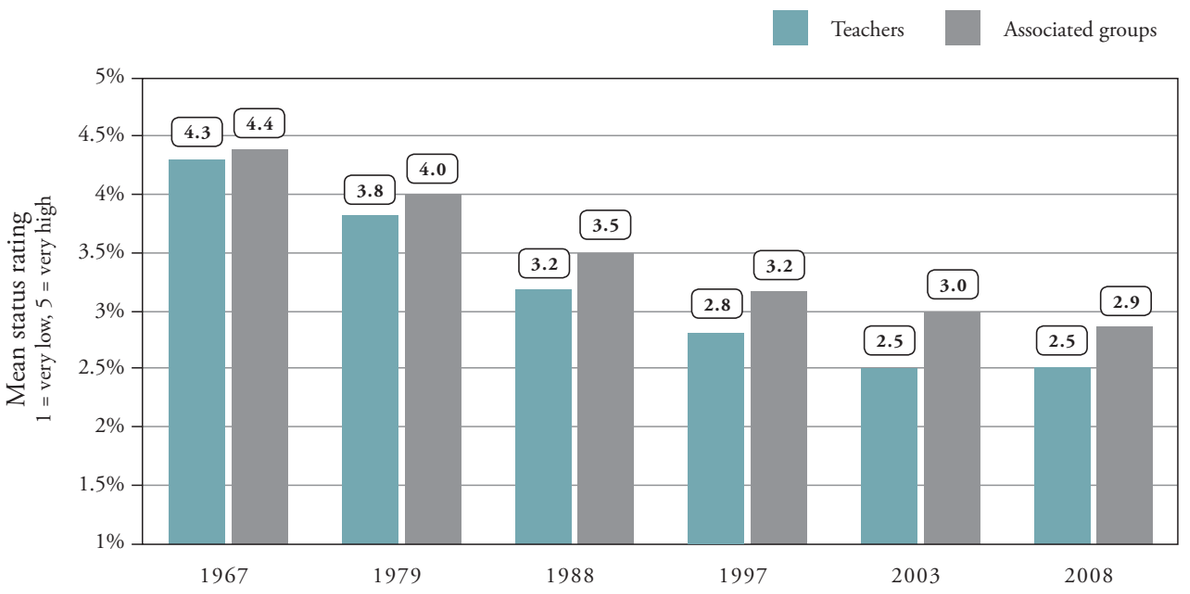
[88] Ibid, p. 8

[89] Freedman, S. L. (2008). *More Good Teachers.* London: Policy Exchange, p. 10

[90] Ibid, p.13

[91] Hargreaves, L., Cunningham , M., Hansen, A., McIntyre, D., & Oliver, C. (2007). *The Status of Teachers and the Teaching Profession in England: Views from Inside and Outside the Profession.* Department for Education and Skills

Figure 6: Declining perceptions of teaching since the 1960s



Source: Hargreaves, L., Cunningham , M., Hansen, A., McIntyre , D., & Oliver, C. (2007). The Status of Teachers and the Teaching Profession in England: Views from Inside and Outside the Profession. Department for Education and Skills.

6.

Characteristics of a Quality Teacher

The problem is there is no agreed list of traits to define or identify an excellent teacher, let alone a general recipe for obtaining them

(Economist Intelligence Unit, 2012)[92]

The research context

Despite the exhaustive literature attesting that some teachers contribute more to their students' academic growth than others, there is a lack of consensus on the attributes of high quality teaching and teachers.

Some experts point to a positive correlation between teachers' scores on verbal ability tests and the achievement of their students, arguing that the best teachers are also intellectually bright. Others insist that the diversity of the contemporary classroom requires successful teachers to have a broad repertoire of instructional strategies. Other experts claim that a teacher's character and attitude are strong predictors of his or her success in teaching.

In the United States, many education authorities measure teacher quality by standardised testing. However, teaching is a complex profession and such tests are too blunt an instrument to detect nuances.

Defining 'quality' too is contentious. For example, in a widely cited review of research on teaching quality, Laura Goe, an expert on teacher effectiveness, cautions against a 'one size fits all' definition because "a variety of occasions and purposes exist for which different definitions may be appropriate".[93]

There is a genuine lack of definition and clarity, and a lot of complexity and ambiguity in developing a list of characteristics of a good quality teacher.

A European policy paper, *The Quality of Teachers*, raised the need for formulating identifiers of teacher quality and proposed the following indicators: perspectives of the various stakeholders; focus on the teaching process; development of teaching materials, and knowledge development; and values and attributes such as reflective thinking, continuing PLD, autonomy, responsibility, creativity, research, and personal judgments.[94]

Despite clear evidence of the key role of teachers in determining student learning, there is considerable debate over which observable characteristics account for this impact.

[92] Pearson. (2012). *The Learning Curve.* Economist Intelligence Unit, p. 7

[93] Goe, L. (2007). *The Link Between Teacher Quality and Student Outcomes: A Research Synthesis,* p. 3

[94] Association for Teacher Education in Europe. (2006). *The Quality of Teachers*

Defining characteristics of quality teachers

Lee Shulman in a seminal text posed the question: "Isn't teaching little more than personal style, artful communication, knowing some subject matter and applying the results of recent research on teaching effectiveness?"[95] No doubt these factors are part of the teacher quality puzzle but quality teaching is much more than that.

A number of national and international studies have tried to define what it means to be a quality teacher.

- Organisation for Economic Co-operation and Development (OECD)
- National Board for Professional Teaching Standards (NBPTS) (United States)
- Office for Standards in Education (OFSTED) (United Kingdom)
- Teach First (United Kingdom)
- New Zealand Teachers Council (NZTC) (New Zealand)
- Post Primary Teachers' Association (PPTA) (New Zealand)
- Education Review Office (ERO) (New Zealand)

The above organisations' definitions of quality teachers come down to the following factors:

- Knowledge of substantive curriculum areas and content.
- Pedagogic skills, including the acquisition of and ability to use a repertoire of teaching and assessment strategies.
- Reflection and the ability to be self-critical (the hallmark of teacher professionalism).
- Empathy and commitment to acknowledging the dignity of students, parents and colleagues while pursuing affective and cognitive outcomes.
- Managerial and organisational competence.
- Challenging and inspiring students to extend their thinking.
- Expecting more of all students.
- Resilience and perseverance.

A McKinsey & Co study[96] examined this issue from a different standpoint, that of pre-identifiable dispositional factors that guarantee teacher success: high overall level of literacy and numeracy; strong interpersonal and communication skills; willingness to learn; and a motivation to teach.

Hattie in his research *Visible Learning*[97] argued that expert or high value teachers were significantly different from their more ordinary peers.

Hattie conducted an extensive review of literature and a meta-analysis of more than half a million studies. He found that expert teachers differed from other teachers, including experienced teachers, in the way they represented their classrooms; the degree of challenges they presented to students; and most critically in the depth of processing their students attained. Students taught by expert teachers exhibited an understanding of the concepts targeted in instruction that was more integrated, more coherent, and at a higher level of abstraction than the understanding achieved by other students.[98]

[95] Shulman, L. (1986). Knowledge and Teaching: Foundations of the New Reform, p. 5-6

[96] Barber, M., & Mourshed, M. (2007). *How the world's best-performing school systems come out on top.* McKinsey & Company

[97] Hattie, J. (2008). Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement. Oxon: Routledge

[98] Hattie, J. (2003). Teachers Make a Difference: What is the Research Evidence? *Australian Council for Education Research Annual Conference.* Melbourne

[99] Dinham, S. (2008). *How To Get Your School Moving and Improving.* ACER Press, p. 20-35

[100] Hattie, J. (2003). Teachers Make a Difference: What is the Research Evidence? . *Australian Council for Education Research Annual Conference.* Melbourne, p. 18

[101] Ibid

Steve Dinham, Paul Ayres and Wayne Sawyer surveyed the characteristics of expert teachers in the late 1990s in NSW who were teaching the Higher School Certificate programme and put together a checklist of 12 features of best practice for all teachers. They found that expert teachers:

1. Are subject specialists.
2. Use a variety of teaching strategies.
3. Use both student-centred and teacher-directed pedagogies.
4. Are authoritative, that is, demanding of and responsive to students.
5. Have high expectations of all students.
6. Engender mutual respect.
7. Emphasise solving problems and applying knowledge.
8. Assess frequently and give great feedback.
9. Challenge students.
10. Assist with note-building.
11. Create a positive classroom climate.
12. Create strong teacher/student relationships.[99]

In New Zealand, there are undoubtedly some excellent teachers in our schools. Overall, the New Zealand teaching cohort is well qualified, committed and able. However, in today's competitive, high skills labour market, the teaching profession must be nurtured and quality teachers need to be recognised and rewarded.

As Hattie noted, there is "a reticence [in New Zealand] to identify such excellence in the fear that others may be deemed not-excellent".[100]

This is demonstrably absurd. Every other profession in New Zealand recognises and esteems excellence, but "We reward [teaching] primarily by experience irrespective of excellence [and] we promote the best out of the classroom".[101] This is not the way to create a uniformly high quality teaching workforce.

7.

The Quality of New Zealand's Teachers

From their own experiences at school, everybody can say they have had excellent, good and bad teachers. Measuring this objectively and systematically, however, is difficult.

New Zealand's devolved system means it is entirely up to each school to develop methods for appraising and evaluating a teacher's performance. There is no ongoing national systematic research on or evaluation of the quality of teachers and teaching.

Indeed, there is a reticence in New Zealand to measure the impact of a teacher on student learning. While it is statistically possible to measure this impact, teaching unions and many in the profession see this as a slippery slope to performance-based pay for teachers and vehemently oppose it.

There are many lists describing the traits and practices of a quality teacher or quality teaching. Measuring teachers against these criteria is problematic because it relies on fair and reliable assessment, and good quality teaching is difficult to pinpoint.

In a research study in NSW, expert teachers were not able to describe fully the types of strategies they employed in their lessons. "Their actions and interventions frequently appeared to be arational and characterised by automaticity."[102] However, because they were expert in their profession, they were able "to provide an appropriate intervention or variation in technique almost unthinkingly and instantaneously".[103]

In some countries teacher qualifications are used as a proxy for teacher quality and the McKinsey & Co research of 2007 adds some credence to this practice. Using TIMMS, PIRLS and PISA results can also give a certain picture of the calibre of teaching taking place in our schools. However, in general, judging the quality of teaching is at best subjective.

How qualified are New Zealand teachers?

The vast majority of teachers (86%) have at least a bachelor level qualification, the minimum requirement to become a registered teacher in New Zealand (level 7 on the NZQA Register of Quality Assured Qualifications).

Those wishing to become a teacher must undertake a specialised education bachelor's degree (three to four years of study). Or, if they have a qualification at level 7 and above, they have to undertake a one-year graduate diploma of teaching. This is the most common combination of qualifications for current teachers with 22,512 holding a bachelor's degree and a graduate diploma (see Figure 6). More than one in 10 teachers (12%) have a post-graduate (honours and above) qualification.

[102] Dinham, S. (2008). *How To Get Your School Moving and Improving.* ACER Press, p. 31

[103] Ibid

[104] Ministry of Education. (2005). Report on the Findings of the 2004 Teacher Census. Wellington

[105] Dinham, S. (2008). How To Get Your School Moving and Improving. ACER Press; Shulman, L. (1987). Knowledge and Teaching: Foundations of the New Reform. Harvard Educational Review

[106] Ministry of Education. (2013, July 5). Match of teacher qualification to subject taught: secondary schooling. Wellington. Retrieved from http://www.educationcounts.govt.nz/indicators/definition/effective-teaching/3997, p. 1

[107] Goe, L. (2008). *Teacher Quality and Student Achievement: Making the Most of Recent Research.* Washington: National Comprehensive Center for Teacher Quality

[108] OECD. (2013) Interactive Data Selection Results 2009 – Perceived Hindrances to Schools Capacity to Provide Instruction, Retrieved September 3 2013, from http://pisa2009.acer.edu.au/interactive.php

[109] Caygill, R., Kirkham, S., & Marshall, N. (2013). TIMSS 2010/11: *Year 5 Students' Mathematics Achievement.* Wellington: Ministry of Education

[110] Caygill, R., Kirkham, S., & Marshall, N. (2013). TIMSS 2010/11: *Year 5 Students' Science Achievement.* Wellington: Ministry of Education

[111] Caygill, R., Kirkham, S., & Marshall, S. (2013). TIMSS 2010/11: *Year 9 Students' Mathematics Achievement.* Wellington: Ministry of Education

[112] Caygill, R., Kirkham, S., & Marshall, N. (2013). TIMSS 2010/2011: *Year 9 Students' Science Achievement.* Wellington: Ministry of Education

Figure 6 shows a considerable improvement since 2004 when only two-thirds of teachers had at least a degree and one-third had a certificate or diploma as their highest qualification.[104] As teachers who hold lower qualifications retire from teaching, the pool of active teachers is becoming more highly qualified.

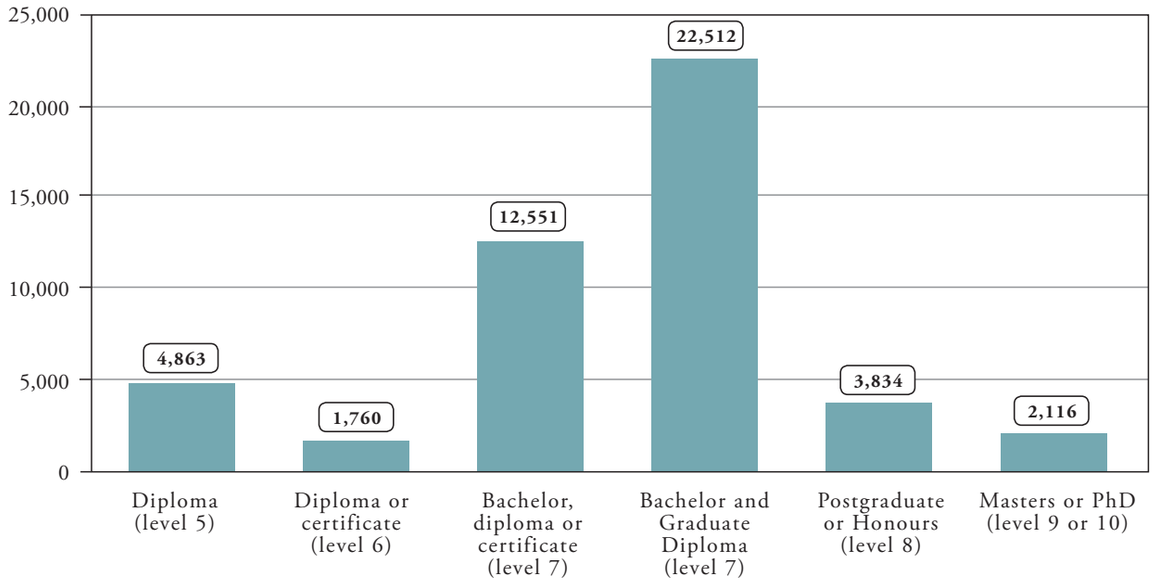
Although 73% of primary school teachers have bachelor's level qualifications or higher, very few (3%) hold post-graduate level qualifications (honours, masters or doctorates). Secondary school teachers are more highly qualified in New Zealand, with 90% holding bachelors' level qualifications and 8% holding post-graduate level qualifications.

Research evidence strongly links teachers' specialist subject knowledge and student achievement.[105] The New Zealand Ministry of Education agrees:

> There is a substantial body of evidence showing that students' achievement, particularly in mathematics and science is influenced by their teacher's previous study in those subjects, along with the teacher's pedagogical knowledge. When teachers have majored or done advanced tertiary study in the curriculum area taught, students gain higher achievement.[106]

Laura Goe synthesised research linking teacher quality variables with student outcomes to find that a mathematics degree was strongly and consistently related to student achievement in mathematics. She also found stronger correlation between secondary school students' achievements and their teacher's subject-area expertise than in primary school.[107]

Figure 7: Qualification levels of teachers in New Zealand



Source: Ministry of Education. (2013). Teachers' pay, allowances and qualifications. Wellington. Retrieved July 6, 2013, from http://www.minedu.govt.nz/NZEducation/EducationPolicies/SchoolEmployment/TopicsOfInterest/BaseSalaryandAllowances.aspx

In PISA 2009, school leaders were asked the extent to which lack of qualified teachers in specific subject areas hindered the school's capacity to provide instruction. Only around 8% said a lack of qualified English teachers hindered the ability to provide instruction, but 14% said lack of qualified science teachers and 18% said lack of mathematics teachers hindered the ability to provide instruction "to some extent".[108]

Findings from the teacher survey from the 2011 TIMSS corroborate these findings. Of mathematics teachers of year 5 students (primary), 76% specialised in primary education and 15% in mathematics (9% had another specialisation).[109] Similarly, 77% of year 5 teachers of science had a primary education major, 13% a science major, and 8% another major.[110] Primary school teachers in New Zealand are overwhelmingly generalists rather than specialists, and the system requires them to teach all subjects in the primary school curriculum.

The TIMSS survey of year 9 teachers (early secondary school) shows a greater match of specialisation to subject taught. This is not surprising because teachers at the secondary level must have a specialist degree in at least one subject relevant to the secondary curriculum. Around two-thirds (66%) of year 9 mathematics teachers had a mathematics major, and almost one-third (30%) had another major.[111] Most year 9 science teachers (94%) had a major in science, and 6% had another major.[112]

8.

The New Zealand Teachers Council's role in Strengthening the Profession

It is timely to pause and review NZTC's current governance structure and functions.

(Peter Lind, Director NZTC).[113]

The NZTC was established in 2002 following the demise of the New Zealand Teacher Registration Board. The purpose of the NZTC, as established under the *Education Act* 1989, is to:

> … provide professional leadership in teaching, enhance the professional status of teachers in schools and early childhood education and contribute to a safe and high quality teaching and learning environment for children and other learners. [114]

The council's main functions are to approve ITE programmes, establish and regulate standards for those qualifications, set standards for entry into the profession, register teachers and renew their practising certificates, and deal with teacher competence and conduct issues. Under the *Education Act*, the council is supposed to exercise disciplinary functions relating to misconduct and convictions, carry out research to support quality teaching, and communicate with the profession to support their work. Essentially, the council regulates the teaching profession.

In 2010, the Minister of Education established the Education Workforce Advisory Group to advise the then Minister on how to raise the quality of teaching. One recommendation of this group was to review the operation of the NZTC.

In September 2011, the Cabinet SOC agreed to review the NZTC as part of a wider programme of strengthening leadership in the profession. The aim was to ensure that the council sets and enforces clear standards for the profession for entry, progression and professional accountability; has the full support of the profession; and is clearly differentiated from both government and unions.

The review was conducted in mid-2012 and the report made public in May 2013, followed by the release of a consultation document inviting public submissions. Submissions closed in July 2013.

Over the past decade, research on the NZTC as well as the teaching professionals' general perception tends to point to the failure of the NZTC to provide the required leadership and support in many of its legislated functions.

[113] Post Primary Teachers Association. (2010). The Teachers Council: Government patsy or voice of the profession. *PPTA Annual Conference*, p. 6

[114] New Zealand Teachers Council. (2012). *Annual Report 2011-2012 for the year ended 30 June 2012.* Wellington, p. 2

As the Ministerial review found, this is partly because although the NZTC has a specific role and purpose, these are not sufficiently differentiated from the work of government or industrial advocacy organisations.[115]

As a result, there is no space for an effective national body capable of providing a distinctive voice and face for teachers that puts the interests of the public and young learners ahead of its own.

The industrial advocacy organisation for secondary school teachers (the PPTA) is an extremely strong union. While accepting the need for a body like the NZTC, the PPTA has also displayed rather lukewarm support for the council. A paper presented at the 2010 PPTA annual conference made it very clear that the PPTA did not support the NZTC embarking on "an expansionary adventure for example into professional leadership on a wider range of issues, or developing further expertise on 'best teaching practice'".[116]

A major recommendation to come out of this PPTA policy paper was for:

> … the PTPA [to] seek an amendment to the Education Act to limit the objectives of the Teachers' Council to its core functions of approval of teaching qualifications and registration and de-registration of teachers, and research and professional development relevant to those core functions.[117]

Because the space for representing teachers is crowded and highly competitive, the NZTC has not been able to deliver, and will never be able to deliver as it current functions, what the government in 2002 was looking for: a professional community of teachers; meaningful engagement by a professional body with members of the profession; active and informed public discussion; debate on educational issues; and a lift in the status of the profession. In short, the NZTC does not have a distinctive brand or even an effective public voice.

Yet the NZTC has the legislative power to control the most critical junctures in the teaching profession and make a positive difference in strengthening the profession: when a candidate presents for initial education and training as a teacher; when a trainee graduates from that ITE; and when a teacher applies to the council for full registration.[118]

In its relatively brief history, the NZTC has not proven it has sufficient capacity or capability to build a broad professional community, public reputation, quality assurance, or provide professional leadership.

The review of the NZTC in 2012 did find that the council was functioning well in researching and developing processes for specific areas of influence – ITE, induction and mentoring, which has been well received – and in developing and implementing the RTC.

However the council has not been operating particularly successfully in leading PLD; promoting policies to strengthen the profession; handling of discipline and competence issues; exhibiting a strong public presence or brand, or communicating with members.[119]

The review also found a general feeling in the teaching community that the NZTC does not hold any value and that it wasn't providing what teachers needed. The director of NZTC, Peter Lind, seemed to appreciate this when he said: "The Council does need to reach out to the profession and reflect the aspirations teachers have for such a professional body.[120]

[115] Winter, P., Baker, R., Aitken, J., & Morris, J. (2012). *Review of the New Zealand Teachers Council: A Teaching Profession for the 21st Century*

[116] Post Primary Teachers Association. (2010). The Teachers Council: Government patsy or voice of the profession. *PPTA* Annual Conference, p. 8

[117] Ibid, p. 9

[118] Winter, P., Baker, R., Aitken, J., & Morris, J. (2012). *Review of the New Zealand Teachers Council: A Teaching Profession for the 21st Century,* p. 52

[119] Ibid

[120] Post Primary Teachers Association. (2010). The Teachers Council: Government patsy or voice of the profession. PPTA Annual Conference, p. 6

Other factors too limit the council's ability to make a difference. As the NZTC review commented, the operation of the council is hindered by "institutional, communication, methodological and other barriers that work against [the NZTC] raising the quality of teaching practice and promoting professional leadership".[121]

According to the PPTA, "The Council's status as a crown entity actually interferes with its ability to lead the profession in ways that challenge government policy".[122] This is because as an autonomous Crown entity, the NZTC must conform to government policy when directed by the Minister.

The composition of the NZTC board has proved to be a major factor in the NZTC's inability to lead and strengthen the profession. The governing council consists of 11 people who are elected or appointed. The NZEI, PPTA, and the NZSTA nominate a member each. The MoE appoints four members, including the chair. Registered teachers elect four members – three from early childhood, primary and secondary sectors and one from principals.

The outcome is a board dominated by sector interests lacking in the skills required for appropriate governance. The MoE's Workforce Advisory Group highlighted this in 2010: "Direct representation of teacher unions on the Council may lead to emphasis on employment conditions and industrial matters rather than professional leadership".[123]

Not everything is right within the NZTC. Lind too has acknowledged this in a note commenting on the rise in registration fees for teachers: "It is timely to pause and review NZTC's current governance structure and functions".[124]

Until this is done, the NZTC will remain something of a 'white elephant' in the New Zealand education system. In its decade-long history, the NZTC hasn't shown any meaningful leadership to the profession and failed to offer policy initiatives to improve the quality of teaching in New Zealand.

As suggested in the Ministerial Review of the NZTC, the structure, role and governance of a truly professional teaching organisation need a major rethink (along the lines of the Engineers' Association and Law Society), a task for the Ministerial Advisory Group appointed in 2013.

The full report of the ministerial review on the NZTC was released on 20 May 2013. It made very clear that the teaching profession does not have the standing it should, largely because it lacks an authoritative professional voice. As a recent *New Zealand Herald* editorial put it: "Teachers do just about all their collective professional speaking through the bodies that also negotiate their terms of employment and professionally that does not work".[125]

The review proposed replacing the NZTC with a council appointed entirely by the Minister but with statutory independence from ministerial direction. This new organisation would register and discipline teachers; identify issues of education policy; lead professional and public debate on teaching practices; promote the interests of the public and of students and children; and represent the face and voice of the profession.

Such changes, if adopted, will take time, as will the new body's ability to prove its independence and earn respect from the public and teachers. It is, however, time for change and for a truly professional voice for teachers. Only then will the teaching profession go some way in gaining a status similar to other professions in New Zealand.

[121] Winter, P., Baker, R., Aitken, J., & Morris, J. (2012). *Review of the New Zealand Teachers Council: A Teaching Profession for the 21st Century,* p. 52

[122] Post Primary Teachers Association. (2010). The Teachers Council: Government patsy or voice of the profession. *PPTA Annual Conference,* p. 3

[123] Education Workforce Advisory Group. (2010). *A Vision for the Teaching Profession.* Wellington: Minister of Education, p. 24

[124] Post Primary Teachers Association. (2010). The Teachers Council: Government patsy or voice of the profession. *PPTA Annual Conference,* p. 6

[125] New Zealand Herald. (2013, May 24). Editorial: New body for teachers key to change. *New Zealand Herald*

9.

The Influence of Unions: Conflicting Missions?

Without full involvement of teachers and their organisations … education systems cannot hope to achieve quality education for all.

(ILO, UNESCO)[126]

The international context

Tom Loveless, in his book *Conflicting Missions*, asks whether teacher unions should be demonised or canonised for their impact on teacher quality and education reform generally.[127] This is a highly relevant question in New Zealand too.

Throughout the Western world, there is ongoing examination and debate about the conflicting goals of teachers' unions. Is their purpose primarily to promote and protect members' (self) interests or should they include and balance additional priorities and roles? If so, which ones?

Even on this latter point there is no agreement. Some unionists argue that a professional focus should be at the forefront of their activities, while others press for social justice issues such as race, class, poverty, gender, inequality, homophobia and globalisation. Many unionists with a more traditional, industrial view believe the focus has to be on traditional union 'meat and potatoes' bargaining.

Charles Kerchner and Julia Koppich, in *A Union of Professionals: Labour Relations and Educational Reform*, argued that industrial unionism was "dysfunctional" and that teachers should engage in "professional unionism" to improve educational quality by putting aside the old, industrial form of unionism.[128]

Even writers sympathetic to teacher unions in Canada and the United States have noted that teacher unions have acquired reputations as "militant, uncooperative, resistant to change, and contributing to the de-skilling of teachers".[129]

A review of research on the educational effects of teacher unions is also contradictory.

Critiques of teacher unions argue that unions inflate the cost of education, oppose parents and the community, and unduly influence politicians proposing educational reform.[130] [131] [132]

Proponents of unions argue that by achieving better wages and working conditions through bargaining, teachers and students benefit while higher teacher satisfaction raises productivity.[133]

Literature on teacher unions therefore reflects a continuum of viewpoints from overt hostility to mild critique intended to redirect their focus.

[126] ILO/UNESCO. (2003). *Committe of Experts on the Application of the Recommendations concerning Teaching Personal.* Geneva and Paris: ILO/UNESCO (CEART), p. vi

[127] Loveless, T. (2000). *Conflicting Missions? Teacher Unions and Educational Reform.* Washington: Brookings Institution

[128] Kerchner, C. T., & Koppich, J. E. (1993).*A union of professionals: Labor relations and education reform.* New York: Teachers College Press

[129] Poole, W. L. (1997). The Construction of Professional Unionism by Teacher Union Leaders. *Annual Meeting of the American Educational Research Association.* Chicago

The New Zealand context

The above research is highly relevant to New Zealand. There is a strong understanding in New Zealand that unions have a role to play in education, and the right to belong to a union is an important one. Yet the unions do face a dilemma. Unions have a clear mandate to support and protect their members. However, principals, politicians, parents, and school trustees need the unions to be a part of a bigger discussion, engaging with new ways to improve schools and raise the quality of teaching, ways that may indeed challenge their conventional ways of working.

Ideally, unions should be at the forefront of debates on accountability, wider parental engagement, curriculum and qualifications needed to meet the needs of all students, and other issues that need to be fixed to genuinely improve young people's life chances.

It is always risky to put too much weight on international comparisons between countries with different cultures, but the most successful school systems do seem to have a more mature approach to unions – seeing them as part of the solution, not the problem, forging innovative social partnerships rather than fostering division. The OECD's education guru, Andreas Schleicher, remarked in his recent visit to New Zealand in July that the nature of unions' 'battles' in a country reflects the maturity of the conversation.[134]

Teachers unions in New Zealand may need to accept that they may have to modify their modus operandi to achieve a lasting impact. As a start, they need to replace their traditional 'shotgun' approach with a more targeted, cohesive and productive approach that may limit the range but would improve union involvement and effectiveness.

The two major teachers unions in New Zealand – the PPTA and the NZEI – cover the secondary and primary sector respectively. Both are regarded as extremely strong and active advocates for their sector, and are regularly asked for media comment on education issues.

Public perception is that both unions are more concerned with industrial advocacy rather than professional matters, although it is also fair to say that both unions have a strong interest in education broadly.

The PPTA website has extensive papers on charter schools, class size, national standards, NCEA, public-private partnerships, and teacher staffing ratios. The PPTA's constitution lists its three main objectives: advance the cause of education generally and of all phases of secondary and technical education in particular; uphold and maintain the just individual and collective claims of its members; and affirm and advance the Treaty of Waitangi.[135]

The NZEI website has a number of media releases on matters of educational importance to NZEI such as charter schools, teacher pay, and special education. It also proclaims a strong professional focus that includes ITE, registration, PLD, career progression, curriculum, and assessment and appraisal. The NZEI sees its role as negotiating members' pay and conditions; providing assistance to teachers; coordinating member activities; campaigning on educational and employment issues; supporting new teachers; providing confidential help and support; and linking members with education workers nationally and globally.[136]

Interestingly, neither association's websites mention teacher quality and its significance in student achievement. The PPTA did release a paper last year called *Quality Teaching for Excellence and Equity* identifying the following

[130] Kurth, M. M. (1987). Teachers' Unions and Excellence in Education: An Analysis of the Decline in SAT scores. *Journal of Labor Research*

[131] Hoxby, C. M. (1996). How Teachers' Unions Affect Education Production. *The Quarterly Journal of Economics*

[132] Eberts, R. W., & Stone, J. A. (1987). Teacher Unions and the Productivity of Public Schools. *Industrial and labor Relations Review*

[133] Rowan, B., Chiang, F.-S., & Miller, R. J. (1997). Using Research on Employees' Performance to Study the Effects of Teachers on Students' Achievement. *Sociology of Education;* Pfeffer, J., & Davis-Blake, A. (1990). Unions and Job Satisfaction: An Alternative View. *Work and Occupation*

[134] Personal Interview with Andreas Schleicher, Deputy Director for Education and Skills, 8 July 2013

[135] Post Primary Teachers' Association. (2013). *Issues in Education.* Retrieved August 1, 2013, from http://ppta.org.nz/index.php/-issues-in-education

[136] New Zealand Educational Institute. (2013). *What we do.* Retrieved August 1, 2013, from NZEI Te Riu Roa: http://www.nzei.org.nz/NZEI/About-Us

five strategies for education systems to enhance and promote quality teaching: collaborative professional inquiry; career pathways to share good practice; ongoing and resourced professional learning; developmental appraisal systems; and shared understanding of quality teaching through aspirational criteria.[137]

The PPTA paper, while accepting that "the quality of teaching that students experience matters",[138] is very negative towards the government's proposed changes to improve the quality of teaching and raise student achievement. The PTPA claims that:

> Introducing performance pay, raising the qualification of teachers, issuing registration requirements and allowing school leaders to easily sort the wheat from the chaff … however well intentioned … will not raise the quality of teaching in New Zealand schools.[139]

While there is little argument on the five general strategies suggested by the PPTA, its paper unfortunately lacks specifics and does not suggest measures to improve teacher quality, instead stating:

> Quality teaching is about much more than individual characteristics or quantitative student results … we would hope that government policy would avoid a misplaced focus on individual teacher quality and instead focus on putting in place a framework that enables excellence across the whole system.[140]

In a similar vein, the NZEI vision statement is strong on rhetoric but lacking in the means of implementing its vision for primary education, which is that:

- Every child grows to be a creative, capable, and confident citizen
- Whānau are involved and support their children's learning
- Schools and early childhood education centres are vibrant, flourishing learning environments, central to their communities
- Communities value their local schools and early childhood education centres, and use their resources and expertise to support them
- Society recognises the power of investing in quality teaching and learning.[141]

An analysis of the PPTA and NZEI websites exemplifies the disparate identities of teacher unions. Both unions do attempt to balance their industrial and professional goals. However, the emergence and durability of political action, and of a social justice focus, means both unions have multiple balances to consider.

The 'social justice' unionism is a relatively recent union focus. One commentators has noted that:

> Social justice unionism views itself as part of a broader movement for social progress rather than merely focused on narrow self-interest. It calls for participatory union membership, education reform to serve all children, collaboration with community organizations, and a concern for broader issues of equity.[142]

Outside of the teaching profession, the actions of the PPTA and the NZEI may seem rather confrontational, militant and at times unprofessional, but the often volatile political and economic contexts in

[137] New Zealand Post Primary Teachers' Association. (2012). *Quality Teaching for Excellence and Equity.* Wellington: New Zealand Post Primary Teachers' Association

[138] Ibid, p. 1

[139] Ibid

[140] Ibid, p. 20

[141] New Zealand Educational Institute. (2013). *What we do.* Retrieved August 1, 2013, from NZEI Te Riu Roa: http://www.nzei.org.nz/NZEI/About-Us

[142] Peterson, R. (1999). Survival and Justice: Rethinking Teacher Union Strategy. In R. Peterson, *Transforming Teacher Unions: Fighting for Better Schools and Social Justice.* Rethinking Schools, p. 11

which teacher unions have to operate does play a part in this approach.

This has led unions to be caught in the rhetoric of reform proposals and to react negatively to any reform ideas proposed by government.

The confrontational approach does need to be softened so the unions can be viewed by governments and the populace as part of the solution to educational problems. This does not mean weak teacher unions. Overseas research shows that:

> Countries with the strongest student performance also have strong teachers' unions, and the better a country's education system performs, the more likely that country is working constructively with its unions…[143]

For any progress in New Zealand on educational reform generally; strengthening the teaching profession; and raising student achievement specifically, it is vital to engage with the union movement.

This puts the onus on governments to communicate their aims more clearly and to involve the stakeholders (teachers and their union representatives), but teachers and unions also need to contribute positively as architects of change.

In other words, a constructive social dialogue between government and the organised teaching profession is essential for any successful educational reform. Research overseas proves that without the active and willing engagement of teachers, most educational reforms fail. But there is need for caution too. An OECD report noted that:

> Stakeholder groups should not be able to exercise a veto over education reforms that are mandated through democratic political processes. To do so would be to risk losing the public support on which education so critically depends. It is difficult to find the right balance, but open and on-going systematic dialogue and consultation are fundamental to the process.[144]

While a recent UNESCO research pointed out:

> Social dialogue is the glue for successful educational reform. Without full involvement of teachers and their organisations – those most responsible for implementing reform – in key aspects of educational objectives and policies, education systems cannot hope to achieve quality education for all.[145]

However, in New Zealand, such dialogue in education remains a fragile process of decision-making. Indeed, such participatory processes and consultations are not a panacea to resolving educational issues and conflicts, but UNESCO believes "they are virtually the only mechanisms for overcoming suspicion and establishing a positive climate for making and implementing education policy".[146]

The challenge for New Zealand is to create a more mature situation in which teacher unions are seen as part of the educational reform process rather than as defenders of the status quo, and confrontational and divisive in their approach to reform.

[143] Organisation for Economic Cooperation and Development. (2011). *Building a High Quality Teaching Profession: Lessons from Around the World.* New York, p. 5

[144] OECD. (2011). *Building a High Quality Teaching Profession: Lessons from Around the World.* New York, p. 52

[145] ILO/UNESCO. (2003). *Committe of Experts on the Application of the Recommendations concerning Teaching Personal.* Geneva and Paris: ILO/UNESCO (CEART), p. 7

[146] Ibid, p. 54

10.

Current Issues in Teaching

Entry into teaching

The NZTC's function is to influence the quality of the teaching profession. Figure 8 shows the council controlling several points of entry that teaching candidates must pass to become fully registered teachers in New Zealand.

Entry point one:
Initial Teacher Education

1. A potential teacher applies to one of 16 ITE providers for selection on a primary or secondary teacher training course accredited by the NZTC.
2. The ITE providers select candidates for their programme(s). The selection process is not regulated and is entirely up to the individual providers. The candidate however must have University Entrance if under 20 years old, or meet minimum literacy and numeracy standards equivalent with University Entrance if over 20 years old, and must be fluent in English.
3. The ITE providers embed the NZTC's Graduating Teacher standards into their courses.

Entry point two:
Provisional registration

1. Before applying for a teaching position, the teacher trainee applies for provisional registration. Once granted, the provisionally registered teacher (PRT) then has a current practising certificate and registration.
2. The PRT can then apply for a teaching position. Individual schools employ teachers.
3. Once employed the PRT undertakes the two-year induction and mentoring programme with a fully registered 'mentor teacher' in the school.

Entry point three:
Full registration

After two years of induction and mentoring, the PRT applies for full registration where the mentor teacher attests that the PRT meets all the RTC. The professional leader (usually the school principal) endorses the application, and the teacher receives a replacement practising certificate and becomes fully registered.

These are three entry points in the NZTC diagram. However, there is one other point in a teacher's career that the NZTC controls.

Entry point four:
Practising certificate

Fully registered teachers renew their registration and practicing certificate every three years. Teachers should have evidence of their recent appraisals against the Registered Teacher Criteria (RTC). The profession leader of the school endorses that the teacher is of good character and fit to be a teacher; has had satisfactory teaching experience; has had their performance assessed as satisfactory against the RTC, and has completed 'satisfactory' PLD.

These certificates signal only a minimum standard.

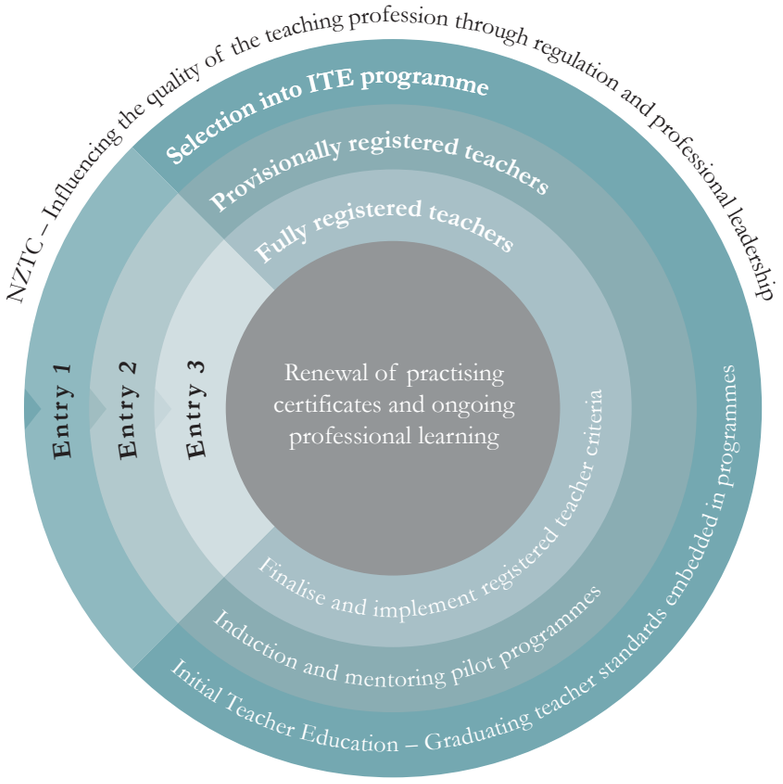
Before any of these official steps take place, the attractiveness of the profession itself is a major quality control factor. Increasing the pool of desirable candidates allows for ITE providers to be more selective about who they train as teachers.

Teacher supply

Most countries find it difficult to match the supply of newly qualified teachers with the demand for teachers in schools.

The MoE's Education Information and Analysis Division has oversight of monitoring supply, but there is lack of clarity on which organisation is

Figure 8: Quality control entry points to teaching



Source: New Zealand Teachers Council

responsible for the overall management of teacher supply and demand, as highlighted in the 2012 review of the NZTC.

Labour market planning has never been a strong point in the operation of the MoE or the NZTC, although Teach NZ (a unit within the MoE responsible for administering scholarships for teaching) claims that demand and supply were better balanced in 2012 than in previous years.[147]

However, anecdotal evidence shows New Zealand is still training far too many Physical Education and history specialists even though it is common knowledge that few jobs exist in these subjects.

The issue of teacher demand and supply in New Zealand is complex and multi-dimensional, reflecting several challenges: expanding the pool of qualified, specialist teachers; addressing shortages in specific subjects; recruiting teachers to the places where they are most needed; distributing teachers in equitable and efficient ways; and retaining qualified teachers in the long term.

The MoE uses various sources to predict demand:

1. Annual surveys of staffing conducted since 1997.
2. Monitoring advertisements in the *Education Gazette* where most vacancies are posted.
3. Roll returns in March and July (schools provide 'up to date' rolls).
4. population trends that might have an impact on future demand.
5. Characteristics of the current teaching population, e.g. nearing retirement age.

However, things can change quickly in supply and demand. In 2003, New Zealand faced such an undersupply of teachers that secondary school teaching was listed on Immigration New Zealand's skill shortages list.[148]

However, in 2013, New Zealand is reported to be facing an oversupply. In a *New Zealand Herald* story in January,[149] the PPTA said it understood there were 500 newly qualified teachers without jobs at the start of the 2013 school year. This is problematic because oversupply lowers the status of the profession and can result in a drop in the overall quality of prospective teachers. The alternative argument to this is that oversupply creates more competition and a greater pool of candidates for schools to choose from.

Trends reported in the 2012 MoE study *Monitoring Teacher Supply* showed a steady decline from 2005 in the percentage of vacant positions, from 0.9% in 2005 to 0.4% in 2012. In real terms, this equates to 363 positions vacant in 2005 and 185 in 2012.[150]

[147] Teach NZ. (2013, July). *Scholarships.* Retrieved July 22, 2013, from Teach NZ: http://www.teachnz.govt.nz/scholarships/

[148] Barback, J. (2013, April). Feast or Famine: The Supply of New Teachers. *Schools of Education PostGrad*

[149] Jones, N. (2013, January 31). New teachers can't find jobs as fewer old ones retiring. *New Zealand Herald*

[150] Lee, M. (2012). *Monitoring Teacher Supply: Survey of Staffing in New Zealand Schools at the Beginning of the 2012 School Year.* Wellington: Ministry of Education

Table 4: Vacant teacher positions (primary and secondary) as a proportion of entitlement staffing (total teacher positions)

	2005	2006	2007	2008	2009	2010	2011	2012
Vacant teacher positions	0.9	0.9	0.9	0.9	0.8	0.4	0.5	0.4

Source: Lee, M. (2012). Monitoring Teacher Supply: Survey of Staffing in New Zealand Schools at the Beginning of the 2012 School Year. Wellington: Ministry of Education.

Other data support a trend over the last few years of positions being easier to fill. Schools were less likely to recruit teachers from overseas in 2012 (287 teachers or 0.6% of the teaching workforce) compared to 1.4% in 2008.[151] However, data on new teachers (PRTs) don't necessarily support a reduced demand. The percentage of PRTs as a proportion of all teachers was 4.5% in 2008, declined to 3.7% in 2009, and remained steady from 2010 to 2012 at 3.3%. That is, the flow of new teachers coming into the profession remained steady from 2010 to 2012. Data for 2013 are not yet available.

Reports of oversupply have been attributed to fewer older teachers retiring than expected as the global financial crisis has forced many older teachers to continue working past the average retirement age.

Contrary to media reports, the reduced overall demand for teachers hasn't reduced the demand for newly qualified teachers. This perhaps reflects a tendency of schools to employ younger teachers to balance out an ageing teacher workforce.[152]

The issue of oversupply gives the impression that New Zealand has no problems finding suitable people to teach in its classrooms, but the number of teachers available does not necessarily equate to quality.

Recruitment issues take many different forms and depend on 'desirable' and 'hard to staff' areas of New Zealand. A consistent finding of the Ministry of Education's annual survey of teacher supply is that it is more difficult to staff rural areas, schools with a higher proportion of Māori students, and low-decile schools.

There are also fluctuations in demand and supply for specific subject areas. Figure 9 shows vacancies as a percentage of positions available in selected subject areas, and how this fluctuates over time.[153] In 2012, the highest percentages of teacher vacancies were in mathematics (19%), science (15%), and Māori (Te Reo, Māori medium bilingual) (13%).

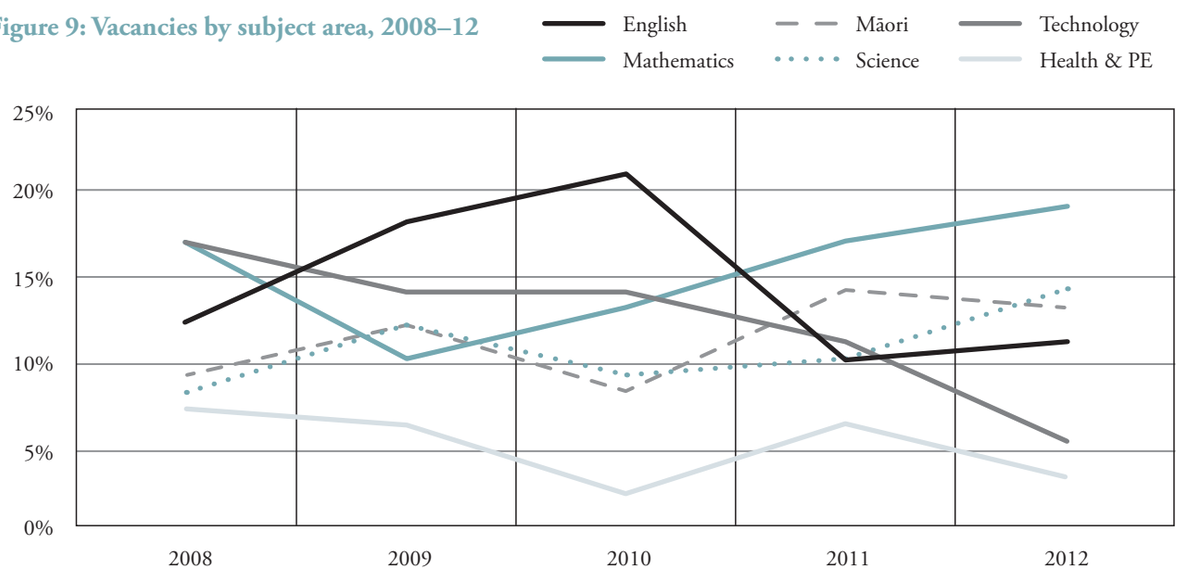
Given the ageing teaching workforce, any oversupply is likely to be balanced in the coming years.

[151] Ibid

[152] Cameron, M., Baker, R., & Lovett, S. (2006). *Teachers of Promise: Getting started in Teaching.* Wellington: New Zealand Council for Educational Research

[153] Lee, M. (2012). *Monitoring Teacher Supply: Survey of Staffing in New Zealand Schools at the Beginning of the 2012 School Year.* Wellington: Ministry of Education

Figure 9: Vacancies by subject area, 2008–12



Source: Hargreaves, Cunningham, Hansen, McIntyre , & Oliver, 2007, p. 33.

> The current oversupply will be a relatively short term phenomenon [as] … primary school enrolments are forecast to increase steadily until 2017. In that year secondary school numbers will also start growing. This growth combined with the high numbers of teachers nearing retirement … may even create the potential for a teacher shortage.[154]

The attraction and status of teaching

> Teachers are primarily attracted to teaching by intrinsic motivation but extrinsic factors play a major role in retaining them (Cooper & Alvarado, 2006).[155]

A high quality teaching workforce requires recruiting the best and brightest candidates into teaching and retaining them in the profession. While recruitment may not be an immediate issue in New Zealand, in part because of the low entry threshold, retention is a problem

Box 5: Dealing with supply

The Voluntary Bonding Scheme

In 2009, New Zealand introduced a voluntary bonding scheme to encourage teachers to teach in certain schools and subjects. Teachers received $10,500 before tax after three years of continuously teaching an eligible subject or in an eligible school; $3,500 before tax at the end of their fourth year in the subject or school, and another $3,500 at the end of their fifth year.

Subjects are reviewed annually. Recipients teaching a subject no longer eligible still qualify for the next payment due but stop receiving payments after that. From 2009 to 2013, this scheme was instituted for specific subjects but now that supply and demand are better balanced, the scheme is only available for those teaching in decile 1 or 'severely isolated' schools.

Teach NZ Scholarships

Teach NZ ITE scholarships change from year to year depending on the demand for specific subjects. Scholarships cover course fees and an allowance ranging from $10,000 to $30,000. To encourage Te Reo speakers to become teachers, Teach NZ has given 215 scholarships to school leavers, graduates, 'career changers' fluent in Te Reo, those who want to work in primary school Māori medium settings or teach Te Reo in secondary schools or other subjects in Te Reo. As with the Voluntary Bonding Scheme, scholarships vary from year to year.

Source: http://www.teachnz.govt.nz/

[154] New Zealand Herald. (2013, February 4). Editorial: Oversupply of teachers won't last

[155] Cooper, J. M., & Alvarado, A. (2006). *Preparation, recruitment and retention of teachers.* Paris: The International institute for Educational Planning and The International Academy of Education

as the gap between the expectations and demands of classroom life over a sustained period is likely to lead to earlier retirement or career change.

So what issues deter people from entering the profession? In 2001, PricewaterhouseCoopers (PwC) surveyed teachers in the United Kingdom and summarised deterrents to recruiting staff, especially quality graduates.

Twelve years later these same issues remain and would resonate strongly with teachers in New Zealand:

- The need to put on a 'performance' for many hours each day was often exhausting.
- There was relatively little contact with other adults during the teaching day.
- The working environment was often a source of pressure with lack of suitable support and inadequate resources.
- Lack of availability of Information and Communications Technology (ICT) resources and lack of ICT support and suitable training.
- Not being in control of their work was a salient cause of stress, exacerbated by the pace and manner of change and insufficient support to meet those changes.
- Resentment about having to engage in administrative tasks that did not support learning. Tasks carried into weekends were an additional source of resentment.
- Teachers felt they were not accorded the trust they merited as professionals.
- Inappropriate expectations of what schools and teachers could achieve intensified pressure, especially in the context of deteriorating pupil behaviour and a lack of parental support.
- Head teachers did not always recognise the need to manage the workload of their staff, and the drive for higher standards was not always balanced by attention to suitable workloads.[156]

Kane and Mallon's research in New Zealand in 2006 on recruiting and retaining teachers outlined similar issues to that of the PwC report. Teachers considered themselves overloaded, inadequately rewarded, undervalued and insufficiently supported. They also reported a growing lack of respect from governments that imposed changes without consulting teachers; students with deteriorating behaviour; parents with unrealistic expectations; the media which blamed teachers for myriad things going wrong in education; and the public who seem keen to hold teachers responsible for almost every social problem.[157]

Kane and Mallon found another side to the retention issue. Many teachers who were no longer passionate about their work continued teaching because they had no alternative or because the pay and work conditions were more secure or better than elsewhere.

> Retaining those who have lost their edge, who are less than committed and who portray explicit lack of enthusiasm can impact significantly on the quality of the outcomes they achieve and the degree to which they are the models for potential teacher candidates.[158]

John MacBeath in his 2012 study, *Future of Teaching Profession,* (sic) listed the factors that attracted people to teaching and kept them in the profession (satisfiers).[159] He then compared these factors with what he termed the 'dissatisfiers' – features that thwarted

[156] Pricewaterhouse-Coopers. (2001). Teacher Workload Study

[157] Kane, R. G., & Mallon, M. (2006). *Perceptions of Teachers and Teaching.* Wellington: Ministry of Education, p. viii

[158] Ibid, p. vii

[159] MacBeath, J. (2012). *Future of Teaching Profession.* Education International Research Institute

attempts to recruit the best and brightest which would likely lead to existing teachers leaving the workforce.

These satisfiers and dissatisfiers need to be considered when planning the future of teaching and "identifying policy and professional drivers which release the brakes and press the accelerator".[160]

Different types of teachers according to sector, decile, gender and ethnicity reported varying levels of satisfaction with teaching in the Kane and Mallon study in New Zealand:

- Secondary teachers reported the lowest level of satisfaction.
- Teachers in medium-decile schools reported lower levels of satisfaction and commitment compared to low- and high-decile teachers.
- Teachers in low-decile schools presented more positive views about teaching and their level of satisfaction.
- Women reported higher levels of satisfaction than men.
- Pasifika teachers reported very positive views about satisfaction and commitment to teaching across all sectors compared to Māori and Pākehā teachers.[161]

A 2008 OECD report on New Zealand said that the failure of the country to attract suitably qualified teachers to the profession because the requirements of the job "have grown to the point where they seem unmanageable".[162] There were also concerns about the relative remuneration and/or the 'doability' of the job.[163]

[160] Ibid, p.12

[161] Kane, R. G., & Mallon, M. (2006). *Perceptions of Teachers and Teaching.* Wellington: Ministry of Education, p. viii

[162] OECD. (2010). OECD Review on Evaluation and Assessment Frameworks for Improving School Outcomes (New Zealand Country Background Report). Wellington: Ministry of Education

[163] MacBeath, J. (2012). *Future of Teaching Profession.* Education Internatinoal Research Institute, p. 25

Table 5: Satisfiers and dissatisfiers in teaching

Satisfiers	Dissatisfiers
Autonomy	Challenge
Being valued	Feeling of not being in control
Being trusted	Lack of time
Being listened to	Isolation from colleagues
Time for learning, teaching and planning	Prescribed or inflexible curriculum
Collegiality	Bureaucracy
Initiative	Testing
Creativity	Policy initiative overload
Contact with students	Pressure to meet targets
Scope for innovation and experimentation	Lack of parental support
	Poor student behaviour
	Stress

Source: MacBeath, J. (2012). *Future of Teaching Profession.* Education International Research Institute. p. 12

Another factor militating against the attraction of teaching as a career in New Zealand is the gradual attrition of professional authority and autonomy. This is partly due to the global thrust of many changes in education, as a result of which teachers' voices have not been heard and copious reforms affecting teaching have been implemented with little discussion or consultation (e.g. National Standards, NCEA, Tomorrow Schools).

For their report *Perceptions of Teachers and Teaching*, Kane and Mallon undertook research commissioned by the Ministry of Education and the NZTC to examine the relationships between key groups' perceptions of teachers and teachers' work, and the recruitment, retention, performance, capability and professional status of teachers.

While their report states with absolute confidence that all key education groups believe that teachers have responsibility for an important service within society, it is equally clear that unlike most high status professions, teaching is not a profession for which there is strong competition to join.

> "By its very nature, teaching struggles to be conceived of as a high status job – its work with young people, its largely feminised workforce, the perceived low academic rigour of its training and the relatively limited salary, are all interpreted as barriers to high status".[164]

Kane and Mallon lay some of the blame for the low status of teaching on teachers themselves:

> There is a sense from the data that teachers are complicit in their own low self-image, which is not assisted by those within their midst who behave unprofessionally, who dress inappropriately and who perform less than effectively in their work with students and colleagues. The data shows that teachers' self-image is also undermined by the lack of procedures to either support or remove non-performing teachers.[165]

Another study, *Perceptions of the Status of Teachers*, reported on interviews conducted with focus groups from 12-year-old students to parents of tertiary students and business career influencers.[166]

Asked what occupations, professions or careers they felt had high status, respondents ranked doctors and/or lawyers the highest and teaching fourth overall.

The overall status rating for teachers – an average score out of 10, on a scale from 1=no status at all to 10=extremely high status – was 6.8 for the general adult population, 6.5 for youth, and a significantly lower 5.8 for employers. Teachers were accorded a similar status on the scale to accountants, nurses, journalists and actors.

In both the adult and youth survey samples, teachers were accorded significantly higher status by Māori and Pasifika than by Pākehā and other ethnic groups.

Figure 10 shows the position of teaching as a profession in the status stakes and the clear hierarchy of status within teaching itself.

Education policy in New Zealand needs to focus on changing the profile of teaching to make it a more attractive career option for new graduates so the highest calibre graduates and professionals consider it for at least part of their working lives.

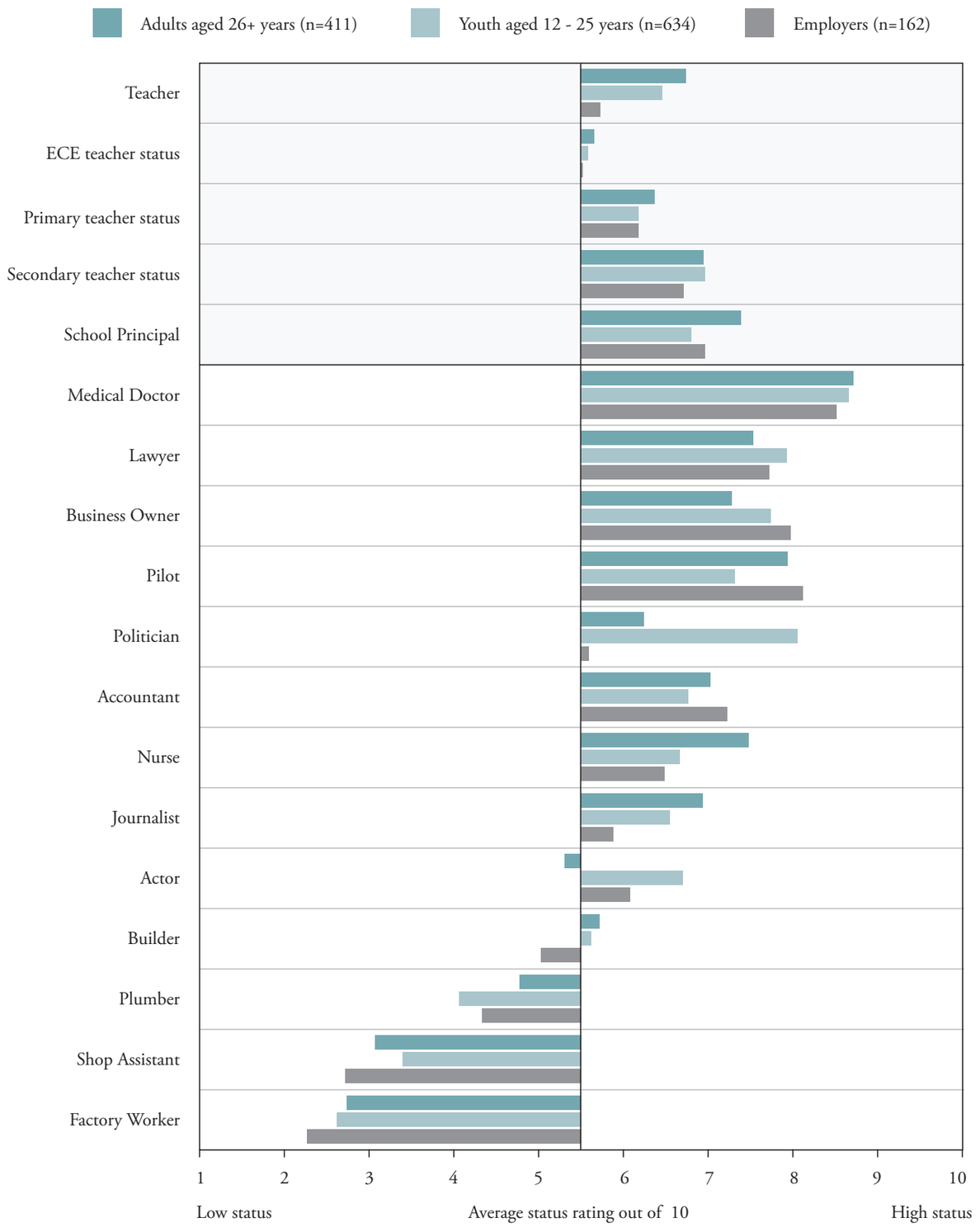
The issue though is a complex one. How a country like New Zealand can suddenly

[164] Kane, R. G., & Mallon, M. (2006). *Perceptions of Teachers and Teaching.* Wellington: Ministry of Education, p. 158

[165] Ibid

[166] Hall, D., & Langton, B. (2006). *Perceptions of the Status of Teachers.* Wellington: Ministry of Education

Figure 10: Status of different careers according to adults, youth, and employers



Source: Hall, D., & Langton, B. (2006). Perceptions of the Status of Teachers. Wellington: Ministry of Education.

raise the status of teaching is something of a conundrum. Raising entry standards for teaching will reduce the supply of teachers, unless there is a corresponding improvement in compensation and working conditions. Raising pay and changing working conditions alone will not automatically translate into a rise in status and teacher quality without raising standards. Teacher evaluation systems can have limited impact if they only relate to compensation but not professional development and career advancement. Giving teachers greater autonomy will be counterproductive if the quality and education of the teachers is inadequate.

However, status is not a static phenomenon; rigorous intervention by government that addresses the attractiveness of teaching compared to other graduate professions can make a difference.

Selection of potential teachers

The careful selection of potential teachers into ITE programmes is crucial to enhancing teacher quality in New Zealand because ensuring that the right people become teachers in the first place is critical in influencing the status of the profession and the quality of education that students receive.

Reducing the availability of teacher trainee places by more rigorous selection processes raises the status, and therefore, the attractiveness of teaching – which will in turn lead to a higher quality pool of potential teachers (Figure 11).
A McKinsey report found:

> "Almost universally, the top school systems … have developed effective mechanisms for selecting teachers for teacher training"[167]

Interviews are crucial for selecting teacher candidates with the right personalities, attributes and attitudes to ensure high standards for entry to teacher training and to produce effective teachers.[168] [169]

Conversely, research shows that if the admissions process includes a formal interview, applicants with unrealistic expectations or a lack of commitment to ITE or teaching could be discouraged from entering the profession.[170]

Entry standards must also include processes to identify the leadership, high motivation, social commitment, and deep content knowledge qualities that are related to excellent teaching and consequent improved student achievement.[171]

> For a person to become an effective teacher they need to possess a certain set of characteristics that can be identified before they enter teaching: a high overall level of literacy and numeracy, strong interpersonal and communication skills, a willingness to learn, and the motivation to teach.[172]

In New Zealand, the NZTC regulates entry into the profession and sets centrally controlled entry requirements. A candidate must have University Entrance if under 20 years old or numeracy and literacy standards to the same level as University Entrance if over 20 years old. A candidate must also demonstrate being of sound character and fit to be a teacher.

It is up to individual providers to decide whether the candidate is of sound character and fit to be a teacher. Programmes are selective but selection is unregulated and up to individual providers of ITE to design their own processes.

[167] Barber, M., & Mourshed, M. (2007). *How the world's best-performing school systems come out on top.* McKinsey & Company, p. 17

[168] Kane, T., Rockoff, J., & Staiger, D. (2006). *What does certification tell us about teacher effectiveness? Evidence from New York City (Working Paper 11844).* Cambridge: National Bureau of Economic Research

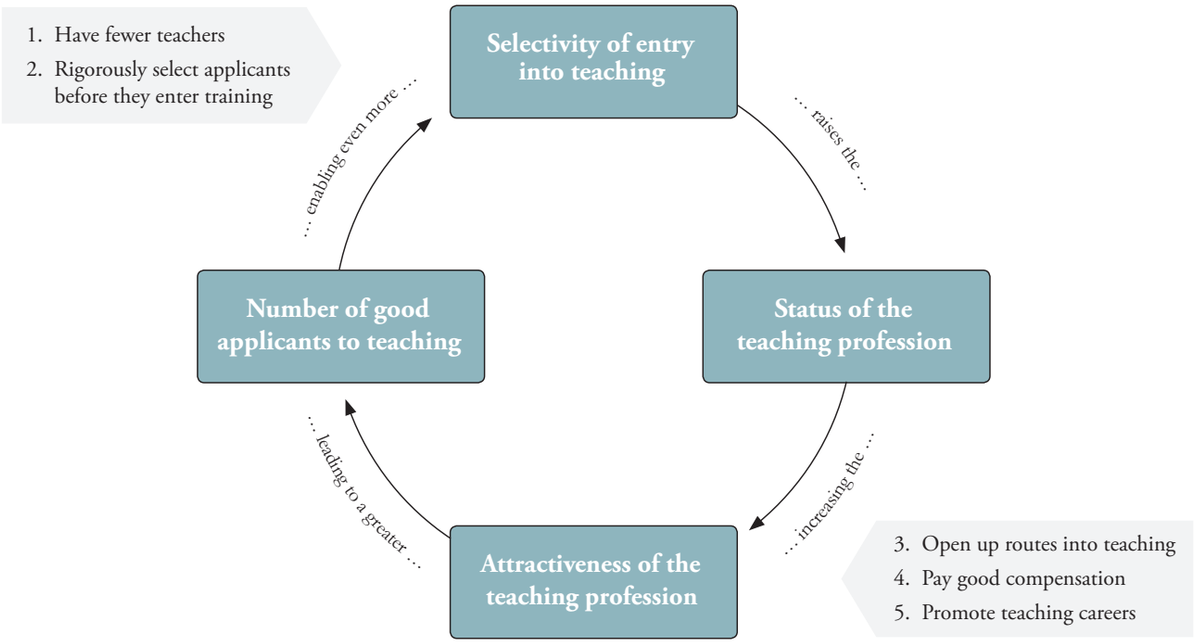
[169] Xu, Z., & Hannaway, C. (2009). *Making a difference: The effects of teach for America in high school.* National Center for Analysis of Longitudinal Data in Education Research

[170] Ashby, P., Hobson, A., Tracey, L., Malderez, A., Tomlinson, P., Roper, T., et al. (2008). *Beginner Teachers' Experiences of Initial Teacher Preparation, Induction and Early Professional Development: A review of literature.* Department for Children, Schools and Families

[171] Alfonso, M., & Santiago, A. (2010). *Selection into Teaching: Evidence from Enseña Perú.* Inter-American Development Bank

[172] Barber, M., & Mourshed, M. (2007). *How the world's best-performing school systems come out on top.* McKinsey & Company, p. 17

Figure 11: Ensuring that the right people become teachers



Source: Whelan, F (2009). *Lessons learned: how good policies produce better schools,* p. 61

Universities are responsible for the vast majority of student teacher intakes.[173] Providers not only consider degree quality (for graduates opting for teaching) and past academic performance but also personal qualities, communication skills, and background experiences.

Alongside more stringent entry criteria, the selection processes need to be more robust and ensure that, in addition to meeting high academic standards, applicants display dispositions such as empathy that are crucial requirements in highly effective teachers.

The 2010 Education Workforce Advisory Group recommended that all teacher education become a post-graduate profession. This would raise the bar for entry and send a long-overdue signal about the expected quality of practitioners.[174]

There is a widespread perception in New Zealand that entry criteria to primary teaching courses (Bachelor of Education) are not sufficiently challenging to encourage academically inclined young people into the profession.

Selecting teachers carefully for primary school is vital. Between ages 5 and 11, children learn most of what will stand them in good stead for the rest of their lives. There may be different views about the curriculum and assessment practices in primary school, but there is agreement on the crucial importance of primary education.

Moreover, students are typically taught by one teacher throughout each year of their primary education, so the quality of the teacher matters even more. A recent study by Durham University found that the effect of having an exceptionally poor

[173] Kane, R. (2005). *Initial Teacher Education Policy and Practice.* Wellington: Ministry of Education

[174] Education Workforce Advisory Group. (2010). *A Vision for the Teaching Profession.* Wellington: Minister of Education

– or an unusually good – teacher in the reception year was still detectable six years later. As Professor Peter Tymms who led the study commented: "More effort needs to be spent on the most valuable years which are the earliest years. The residual effect lasts as long as we can measure it".[175]

Unlike their secondary colleagues, primary teachers are expected to have sufficient expertise across the entire curriculum from basic core to history, science and geography, as well as the more recent addition of modern foreign languages.

This does not mean that every primary school teacher must be equally competent and knowledgeable in the whole curriculum; there is still a place for the generalist. Nevertheless, because the knowledge and skills required of a teacher are becoming more complex and demanding, greater specialisation is inevitable.

Secondary teacher trainees are generally required to have completed a subject-based degree with a mix of subjects relevant to their chosen teaching subjects before being accepted for a teacher training programme. Some tertiary providers offer conjoint teaching degrees to allow trainees to study a subject-based degree alongside a teaching degree.

However, actual selection processes are still considered insufficiently rigorous.

Selection into secondary and primary school teaching at some providers still tends to be about 'getting bums on seats' as funding is based on numbers enrolled. There is also little communication or planning between Teach NZ and university education faculties on the likely numbers of teachers required each year in specific subjects – leading to the current oversupply of social science and PE teachers and a shortage of mathematics and te Reo teachers.

Kane and Mallon noted that entry standards for teaching in New Zealand are "insufficiently rigorous … and younger student teachers lack the professional attitudes and commitment required in today's classrooms".[176]

Failure to rigorously control entry into ITE has a detrimental effect on teacher quality because it creates an oversupply of candidates, some of whom cannot secure teaching posts. This in turn makes ITE even less appealing to potential new recruits. Conversely, making ITE more selective can make teaching more attractive to high performers.

> Too great a supply … is not necessarily a blessing. Some countries with teacher surpluses find it hard to ensure that talented people choose to enter teaching. And surveys find that school principals in countries with a teacher surplus worry more about teacher morale and enthusiasm than do those in countries without such a surplus.[177]

New Zealand needs to strengthen its selection processes for entry to teacher training. In particular, ITE providers should ensure that accepted applicants possess genuine intrinsic motivations to become a teacher as well as the requisite academic ability. This is because high-achieving education systems all begin the screening process at the entry-to-initial teacher preparation stage with rigorous checks designed to assess teaching potential.

[175] The Sutton Trust. (2009). *Teach Primary: Improving the status and quality of primary school teaching,* p. 6

[176] Kane, R. G., & Mallon, M. (2006). *Perceptions of Teachers and Teaching.* Wellington: Ministry of Education, p. vi

[177] Ladd, H. F. (2007). *Teacher Labor Markets in Developed Countries.* The Future of Children, p. 205

Initial teacher education

> A common finding internationally is that teachers are generally unprepared for surviving and thriving in the world of classrooms (John MacBeath).[178]

> There is a lack of a systematic evidence base of the effectiveness of these teacher education programs and that the development of an evidence base is critical in promoting the credibility of the institutions offering these programs (John Hattie).[179]

While it is now well accepted that the quality of an education system cannot exceed the quality of its teachers, it is also true that the quality of teaching will never exceed the quality of the system in place to train, develop and advance teachers.

Given that all schools ultimately depend on the talents, drive, inspiration and creativity of individual teachers to get every child to reach their true potential, ensuring that ITE is the best it can possibly be is a genuine challenge for all education systems.

Around the world and within New Zealand, there is great diversity in ITE. However, in general four components of high quality teacher preparation programmes contribute to their success: high entry standards; strong content preparation (subject matter); substantial pedagogical training including competencies in the area of classroom management and discipline; and supervised practicum experiences in schools.

In New Zealand, there is considerable debate about the weight to be given to each of the above. What is not debatable is the contention that well-prepared teachers are vital for effective student learning.

New Zealand is unusual in that ITE is offered by different types of institutions: private training establishments, polytechnics, universities and wānanga.[180] However, universities and colleges of education (now merged into universities) are responsible for the vast majority of student teacher intake: 96% for secondary and 90% for primary. The move to academise ITE in the last decade or so has followed an international trend towards placing ITE within universities.[181]

Including early childhood teacher education providers, there are 27 accredited providers of ITE and more than 85 different qualifications being offered and implemented through a variety of delivery modes in New Zealand. There are 16 secondary courses and 32 primary courses. Kane and Mallon concluded there were too many providers of ITE in New Zealand.[182]

The main route to becoming a primary school teacher in New Zealand is to complete one of 18 available three or four year Bachelor of Education or Bachelor of Teaching undergraduate degrees. Some of these may have a speciality component, e.g. Steiner education, Pasifika teaching, teaching in religious schools, Māori medium teaching.

Three additional courses are available with conjoint degrees (e.g. Bachelor of Arts plus Bachelor of Education) and two Bachelor of Teaching or Education with Graduate Diplomas attached, which take four years.

For those already holding a degree, there is a one-year Graduate Diploma of Teaching (Primary).

Secondary school teachers usually take a subject-based undergraduate degree with a mix of subjects relevant for secondary school and then a one-year graduate diploma in teaching. Eleven one-year Graduate Diploma in Secondary Teaching programmes are available in New Zealand.

[178] MacBeath, J. (2012). Future of Teaching Profession. Education International Research Institute, p. 17

[179] Hattie, J., Anderson, M., & Clinton, J. (n.d.). Developing an evidence base model for the effects of teacher education programs on teacher candidates. Unpublished

[180] Kane, R. (2005). *Initial Teacher Education Policy and Practice.* Wellington: Ministry of Education

[181] Ibid

[182] Ibid

Various studies reveal dissatisfaction in schools with the quality of ITE teachers. Kane and Mallon reported "variable quality of current student teachers and … widespread dissatisfaction with current ITE across all sectors".[183]

A more recent NZTC survey found that only 57% of professional leaders in 2011–12 were satisfied with the quality of ITE graduates they employed, and only 70% of ITE graduates felt their degree prepared them for their teaching careers.[184]

Kane and Mallon also found resistance to fail non-performing teachers; student-teachers spent insufficient time in school-based practicums, and younger students lacked the required professional attitudes and commitment.[185]

Responsibility for approving ITE programmes in New Zealand rests largely with the NZTC. One of its main functions is "setting the requirements for approving initial teacher education programmes in conjunction with other quality assurance bodies".[186]

The NZTC also sets the Graduating Teacher Standards that identify the competencies that ITE graduates need to achieve in professional knowledge, professional practice, and professional values and relationships with students, colleagues, whānau and guardians.

Moving ITE into university settings may have provided graduates with more theoretical knowledge in teaching, but there is dissatisfaction in the school sector about the consequent reduction in practicum time in schools.

Anecdotal evidence has the vast majority of teacher trainees describing their practicum experiences as the most valuable component of the teacher preparation programme, particularly when they are carefully planned, interwoven with coursework, undertaken with highly effective classroom teachers, and carefully supervised.

After conducting a comprehensive review of the world's best-performing education systems, McKinsey & Co suggested a minimum requirement of 20 weeks of in-school training.[187] The minimum requirement in New Zealand is 14 weeks.

Only the private Christchurch-based Graduate School of Education offers a programme that exceeds this minimum requirement. This predominately school-based teacher training programme is unique in New Zealand; two-thirds of the year's programme involves school-based training with mentors.

Is there a most effective way to educate teachers?

> Teacher education is the Dodge City of the education world. Like the fabled wild west town, it is unruly and chaotic.[188]

A 2004 review of ITE in New Zealand by Marie Cameron and Robyn Baker found something similar and noted longstanding tensions and disagreement about the form that ITE should take:

> There is lack of consensus about what the specialised body of knowledge and skills for initial teacher education should be, who has the right to say what it is, and how it can be recognised and validly assessed. Views of what the knowledge base should be are dependent on perspectives of intended goals of education and debate about purposes of education will be on going.[189]

[183] Kane, R. G., & Mallon, M. (2006). *Perceptions of Teachers and Teaching.* Wellington: Ministry of Education, p. vi

[184] New Zealand Teachers Council (2012). *Annual Report 2011-2012 for the year ended 30 June 2012.* Wellington

[185] Kane, R. G., & Mallon, M. (2006). *Perceptions of Teachers and Teaching.* Wellington: Ministry of Education, p. vi

[186] New Zealand Teachers Council. (2013). *Statement of Intent 2013-2016.* Wellington, p. 5

[187] Barber, M., & Mourshed, M. (2007). *How the world's best-performing school systems come out on top.* McKinsey & Company

[188] Levine, A. (2006). *Education School Teachers.* The Education Schools Project, p. 3

[189] Cameron, M., & Baker, R. (2004). *Initial Teacher Education: Research on Initial Teacher Education in New Zealand 1993-2004 Literature Review and Annotated Bibliography.* Wellington: New Zealand Council for Educational Research, p. 14

Cameron and Baker explain that various agencies – New Zealand Qualifications Authority (NZQA), Teacher Registration Board (TRB), Ministry of Education (MoE), Education Review Office (ERO) – have all attempted, with limited success, to develop criteria, competencies and standards for "satisfactory teaching". There still remains "little published description as to how, whether, or which standards are used to guide the knowledge base and exit standards" for ITE in New Zealand.[190]

From 1996 to 2001, five reviews of ITE were conducted – two by ERO (1996 and 1999) and one each by Te Puni Kokiri, the Education and Science Select Committee, and Geoffrey Partington on behalf of the Education Form.[191]

These reviews exerted "continual pressure on initial teacher education without resolution or achievement of balance" with "little debate between parties involved, and little progress in addressing issues of concern or in reaching agreement on fundamental principles for initial teacher education".[192]

University-based approaches to educating teacher trainees have been under considerable pressure to re-examine and reform their approach to teacher preparation. In light of this, universities such as the University of Auckland are investigating different approaches.

More recently, there has been a growing agreement among educationalists that challenges the effectiveness of ITE being judged solely in terms of inputs. The trend is definitely moving towards an outcomes-based model – what teacher trainees should know and be able to do upon completing their teaching diploma.

In 2007, the NZTC issued the Graduating Teacher Standards, a de facto operational definition of effectiveness for ITE focusing on the outcomes of teacher evaluation.

While this emphasis on outcomes is widely accepted, there are still contrary views. One of the most prominent proponents is American academic Linda Darling-Hammond, who contends that any accreditation process should focus on the essential ingredients of a responsible preparation for teaching.[193]

Alternative routes into teaching

The OECD acknowledged the great variations in teacher training but identified a number of key ideas that could improve the supply of quality teachers, including the need for ITE providers to open new routes into a teaching career without compromising the rigour of traditional routes.[194]

In New Zealand, however, there is little choice for people to enter teaching as a second career without going through the same processes as somebody considering teaching as a first career. For those with life experience and a degree, deciding to teach generally means being out of the workforce for a year and incurring the costs of training with no guarantee of a job at the end of the course.

Using the analogy of surgeons being apprenticed to an experienced colleague in an operating theatre, some researchers have argued that the craft of teaching is best gained through apprentice-style training in classrooms.[195]

In line with this thinking, the University of Auckland recently introduced the Teach First programme as an alternative to the regular graduate teacher programme. Teach First NZ is modelled on the UK Teach First. It represents a major break from the traditional pathway into teaching because it allows recruits to go straight into a teaching job after an intensive and short orientation.

[190] Ibid, p. 15

[191] Ibid

[192] Ibid, p. 22

[193] Darling-Hammond, L. (2010). Teacher Education and the American Future, *Journal of Teacher Education*

[194] OECD. (2011). *Building a High Quality Teaching Profession: Lessons from Around the World.* New York

[195] Hagger, H., & McIntyre, D. (2006). *Potential, Learning Teaching from Teachers: Realising the Potential of School-based Teacher Education.* Open University Press

Teach First is a niche programme; depending on its success, access to such employment-based routes into teaching should become more common and easier. The standards for Teach First are extremely high; the programme is highly selective, and participants study towards a field based post-graduate diploma while they are teaching in schools.

The problem with the current modules (four-year undergraduate and one-year post graduate) is that they limit the pool of potential teachers.

In the four-year primary programme, the pool of potential teachers is generally limited to those who decide to become teachers when they are 18 years old. People joining post-graduate programmes have to accept a considerable financial loss with no guaranteed job at the end of the course. This deters many likely teaching candidates, particularly those who have other good prospects in the job market.

Creating alternative routes will allow career changers to give teaching a go by starting to teach in a school with just a few weeks of intensive training and completing their training on the job in the first two years.

> Countries which have opened up these routes into teaching have been able to increase both the number and quality of applicants as a result … Official evaluations found that these teachers were better qualified, more motivated, and stronger teachers after their first two years of teaching than those who had entered the profession by traditional routes; a finding common to similar programs in other countries.[196]

It is interesting but frustrating that despite employment-based teacher-training routes proving popular and successful in the United Kingdom, the NZTC still refuses to register teachers from the United Kingdom who have gone through similar programmes. This robs New Zealand of quality overseas-trained teachers.

Induction and mentoring

New Zealand has had induction and mentoring programmes since 1985. Initially, New Zealand encouraged mentoring programmes to offset retention and recruitment problems. The culture of induction and mentoring is now well recognised. Frances Langdon (Head of the School of Teaching and Learning at the University of Auckland) says New Zealand is still "at the forefront of induction … but we need to strengthen what we do".[197]

This is significant because the attrition rate for primary teachers in New Zealand is 33%,[198] and research from around the world indicates that beginning teachers who participated in quality induction and mentoring had higher satisfaction, commitment and retention rates.[199]

Hence, while it is true that much of the responsibility for preparing new teachers for the workforce lies with ITE programmes, there are other ways schools can, and should, provide support to ensure PRTs grow professionally and succeed in the classroom.

After provisional registration, beginning teachers, in theory, undergo a two-year induction and mentoring programme as PRTs where they are placed under the guidance of a mentor who is an experienced and fully registered teacher.

Schools are given a time allowance of five hours a week for each first-year

[196] Whelan, F. (2009). *Lessons learned: How gooed policies produce better schools*, p. 69

[197] Langdon, F. (2009). Induction and mentoring for new teachers: getting it right. *Te Kuaka*

[198] Ibid, p. 8

[199] Ingersoll, R., & Strong, M. (2011). The impact of induction and mentoring programs for beginning teachers: A critical review of the research. *Review of Educational Research*

teacher and 2.5 hours per week for each second-year teacher. In primary schools, this allowance can be shared between the teacher and the mentor teacher, usually from the same syndicate while in secondary schools, the time allowance is given directly to the beginning teacher.[200]

A first-year teacher should have a workload of no more than 15 contact hours of teaching plus five hours of 'mentoring and induction' time, and five hours of non-contact time. The mentor teacher may be the head of department but not necessarily. This contrasts with the 20 hours of contact time of fully-registered teachers.

Research shows that an education system is only as good as its teachers. Similarly, the value added from a mentoring and induction system is only as good the mentor teacher. Indeed, the mentor should be selected for his/her teaching ability and skills in effectively analysing and evaluating instruction, and discussing their findings with PRTs.

Some secondary schools with more than one beginning teacher appoint a coordinator (generally a senior manager) who oversees the mentoring and induction programme, while all secondary schools in 2005 were allowed to appoint a specialist classroom teacher (SCT) whose role is to provide PLD, guidance, mentoring and induction to other staff.

The SCT role was part of the 2004 Secondary Teachers' Collective Agreement. The role also allows for exploring the use of different career opportunities to retain teachers in the classroom by providing an alternative career path to the more traditional management and administration pathway out of the classroom.

SCTs are appointed from a school's permanent staff and must be a registered teacher, with a significant classroom teaching load. In addition, they must have at least six years of teaching experience (in New Zealand or overseas) and have three successful attestations against the experienced classroom teacher standards, or overseas equivalent. SCTs receive a substantial time allowance and an extra $8,000 per year. This role is integral in the modern induction and mentoring programmes.

Even though induction and mentoring programmes are well developed in New Zealand, there is much disparity in the quality and accessibility of these programmes. Some are administrative introductions while others are years-long partnership programmes.

There is also variation between primary and secondary schools. In a review of the literature[201] and from her own survey research[202], Marie Cameron found that while primary school induction and mentoring programmes were generally excellent, secondary school programmes lagged far behind.

This is likely related to sharing the release time for mentoring and induction. In secondary schools, apart from the SCT, the mentor teacher is given no formal release time for this work, so beginning teachers may not receive the appropriate induction and mentoring that is vital to settling into a new and challenging career.

Cameron's literature review and back-up survey of beginning teachers in New Zealand found that 5% of primary teachers and 12% of secondary teachers did not have an assigned mentor.

In her ongoing research into beginning teachers in primary and secondary schools, Cameron has categorised the nature of the induction and mentoring programmes as perceived by teachers (see Table 6). Of note, all low-decile schools experienced supportive induction processes.

Responding to this variability, the NZTC commissioned a large research programme in 2007 and 2008 to

[200] Cameron, M. (2006). *Learning to Teach: A Literature Review of Induction Theory and Practice.* Wellington: New Zealand Teachers Council

[201] Ibid

[202] Cameron, M., Dingle, R., & Brooking, K. (2007). *Learning to Teach: A Survey of Provisionally Registered Teachers in Aotearoa New Zealand.* Wellington: New Zealand Teachers Council

Table 6: Nature of induction and mentoring programmes as perceived by sample of teachers

Nature of Induction and Mentoring	Primary and Intermediate	Secondary
Systematic and supportive	23(66%)	8 (36%)
Minimal or unsupportive	5 (14%)	10 (45%)
Ad hoc	7(20%)	4 (18%)
Total Sample	**42 (100%)**	**22 (100%)**

Source: Cameron, M., Baker, R., & Lovett, S. (2006). *Teachers of Promise: Getting started in Teaching.* Wellington: New Zealand Council for Educational Research, p. 35.

investigate the nature of 'advice and guidance' received by PRTs.

Only half the PRTs in New Zealand were explained their entitlements during the orientation process and many were not receiving their full release time entitlements.[203]

Hence, while there is a national set of guidelines for induction and mentoring and for mentor teachers, it is up to each individual school as to how the induction and mentoring programmes are designed.

Cameron proposed induction and mentoring programmes should be aligned with systemic goals, have a clear rationale and purpose, and be adequately resourced.[204] The mentors should have strong interpersonal skills, commitment and knowledge, and be given PLD support. Beginning teachers should observe models of good teaching and receive structured feedback. The programme should be tailored to the beginningteachers based on observations of their teaching practice and analysis of student learning. There should be a formal induction plan to assist teachers to develop 'good pedagogy' i.e. focus on student learning.

Perhaps the most important message that emerges from the literature on induction is: it is what teachers are inducted into that is critical.

Schools need to have a whole-school culture of support and mentoring. Learning to teach doesn't end after two years.[205] 'Integrated professional cultures' have a shared responsibility and are "in fact embedded in a rich and professionally nourishing professional culture".

Induction programmes tend to have more impact when they are part of comprehensive professional learning environments. In New Zealand, beginning teachers who are well supported tend to work in environments where teacher learning is supportive throughout the school. In New Zealand, however, the nature of induction is often a 'one-off' approach to fix specific problems (e.g. classroom management).[206]

Effective induction programmes must focus on the subject-specific pedagogical strategies needed by PRTs to promote and foster student learning. Improving instruction and student learning often proactively addresses the classroom management issues many beginning teachers experience.

Researchers have found that in general, mentors in New Zealand tend to give more practical advice and support rather than inquiry into teaching practice.[207] A pilot study of induction and mentoring

[203] Ibid

[204] Cameron, M. (2006). *Learning to Teach: A Literature Review of Induction Theory and Practice.* Wellington: New Zealand Teachers Council

[205] Kardos, S. M., Johnson, S. M., Peske, S. M., Kauffman, D., & Liu, E. (2001). Counting on colleagues: New teachers encounter the professional cultures of their schools. *Educational Administration Quarterly*

[206] Cameron, M., Dingle, R., & Brooking, K. (2007). *Learning to Teach: A Survey of Provisionally Registered Teachers in Aotearoa New Zealand.* Wellington: New Zealand Teachers Council

[207] Timperley, H. (2001). Mentoring conversations designed to promote student teacher learning. *Asia-Pacific Journal of Teacher Education,* 111-123; Sinnema, C. (2005). Teacher Appraisal: Missed Opportunities for Learning. *PhD Thesis*

Figure 12: Characteristics of limited and high quality induction and mentoring

Limited induction and mentoring	High quality, intensive induction and mentoring
Emotional support • pastoral care • pep talks • support, advice, guidance • collective responsibility	**Links practice to a view of good teaching** • learning focus • goal oriented – PRT and mentor goal
Technical support • advice / handy tips • focus on behaviour • practical – mentor taking class so PRT can focus on small groups • short-term fixes • teaching focus • surface issues • hierarchical – mentor 'sorts out' PRT issues • mentor talks, PRT listens • reactive • big "whole deal" at once observation • mini "me" scenario • speak to the learner – teachers are ākonga	**Builds confidence by developing pedagogical expertise** • setting goals – own development • underpinned by achievement of ākonga **Has a developmental (but not linear) view of learning to teach** • long term focus • deeper exploration of practice and evidence of learning – and what lies behind the surface issues **Develops teacher autonomy and agency** • teacher voice • determine next steps / take responsibility • PRT agency involved in making decisions • Examine / reflect on own practice • Deeper (becoming self-regulated)
Mentor teachers • chosen for convenience rather than skill or 'best fit' for the PRT • not supported with professional learning for the role • work in isolation with an individual teacher	**Builds knowledge by using their teaching as a site of inquiry** • practice of effective pedagogy • proactive – setting the PRT up – application of strategies **Provides planned, and takes advantage of incidental learning opportunities** • focused and specific • detailed observation – but selective • mentor and PRT focused – purposeful, know what you'll observe • range of tools used in observation **Engages in serious professional conversations** • professional discussion – challenge pedagogy • active listening • explore deeper issues • learning conversation process (partnership) • more about mentor (listening) and their role
This table provides examples of what 'limited' induction and mentoring looks like in practice, compared to high quality educative induction and mentoring. Aspects of 'limited' induction and mentoring. however, may still be important, particularly the emotional or pastoral support to new teachers.	**Bases feedback and assessment on evidence** • evidence based / interrogate data • get PRT to think more and have evidence for what he/she is doing **School, kura or ECE service structure** • mentoring given value and importance

Source: Langdon, F. (2011). *Induction and Mentoring Pilot Programme: Primary. Leading Learning in Induction and Mentoring.* Wellington: New Zealand Teachers' Council, p. 2

in primary schools found that "mentors base their practice on their own beliefs and experiences of mentoring", which "can entrench current ways of teaching rather than inquire into and transform practice".[208] Mentoring should go beyond simply 'feel good' support.

Career development

> Teacher evaluation is essential for improving the individual performance of teachers and the collective performance of education systems … a specific issue is the extent and style of links between assessed performance, career advancement and compensation (OECD).[209]

Performance management

In 2009, Nexus conducted a thorough international literature review on performance management systems in teaching to find:

- Effective performance management systems lead to improvements in teaching.
- The best education systems in the world have ongoing performance management and high levels of lesson observation.
- Teachers report that appraisal and feedback make a difference to their work.
- Relatively few teachers participate in PLD programmes with the largest impact on their work – qualification programmes, and individual and collaborative research.
- Performance management for beginning teachers should focus on creating reflective practitioners.
- Unions can improve the implementation of performance management.[210]

Research strongly supports the vital role of meaningful teacher evaluation in increasing teacher effectiveness. It is a complex task requiring more than just reviewing student achievement data. To be effective, teacher appraisal requires multiple sources of feedback, lesson observations, and teacher buy-in to the appraisal process. Finally, the appraisal must be linked to worthwhile PLD and contribute to effective career options for teachers.

While teacher appraisal, performance management, PLD, career structures, and remuneration shouldn't be exclusively tied to student achievement data, goals should align with student learning. As this chapter outlines, in New Zealand there is a lack of linking PLD to improving student learning.

Annual appraisal of teachers is mandatory for all New Zealand schools. The professional development orientation of the MoE's mandatory requirements enables appraisal to enhance teacher practice and student learning.

Currently, teacher appraisal in New Zealand is used to gain or renew registration to teach, as part of the employing school's performance management processes for salary progression, and to employ the school's performance management processes to improve professional practice.[211]

In New Zealand, there are two sets of conflicting standards used to appraise teachers: those used for the registration process as set out by the NZTC and those incorporated into collective employment agreements.[212]

Registration is a requirement for teachers to teach in New Zealand schools.

[208] Langdon, F. (2011). *Induction and Mentoring Pilot Programme: Primary. Leading Learning in Induction and Mentoring.* Wellington: New Zealand Teachers' Council, p. 2

[209] OECD. (2011). *Building a High Quality Teaching Profession: Lessons from Around the World.* New York, p. 33

[210] Nexus. (2009). *The performance management and development of teachers in Australian schools*

[211] OECD. (2010). OECD Review on Evaluation and Assessment Frameworks for Improving School Outcomes (New Zealand Country Background Report). Wellington: Ministry of Education

[212] Ibid

The NZTC is responsible for registering teachers as competent to practice. There are two levels of registration. PRTs are registered upon graduation from an accredited ITE programme, and undertake an induction and mentoring programme for two years before applying for full registration. Full registration is incorporated into the individual schools' performance management system and is the responsibility of the Board of Trustees, a responsibility generally delegated to the leader of the school. Fully registered teachers have to apply for renewal every three years.

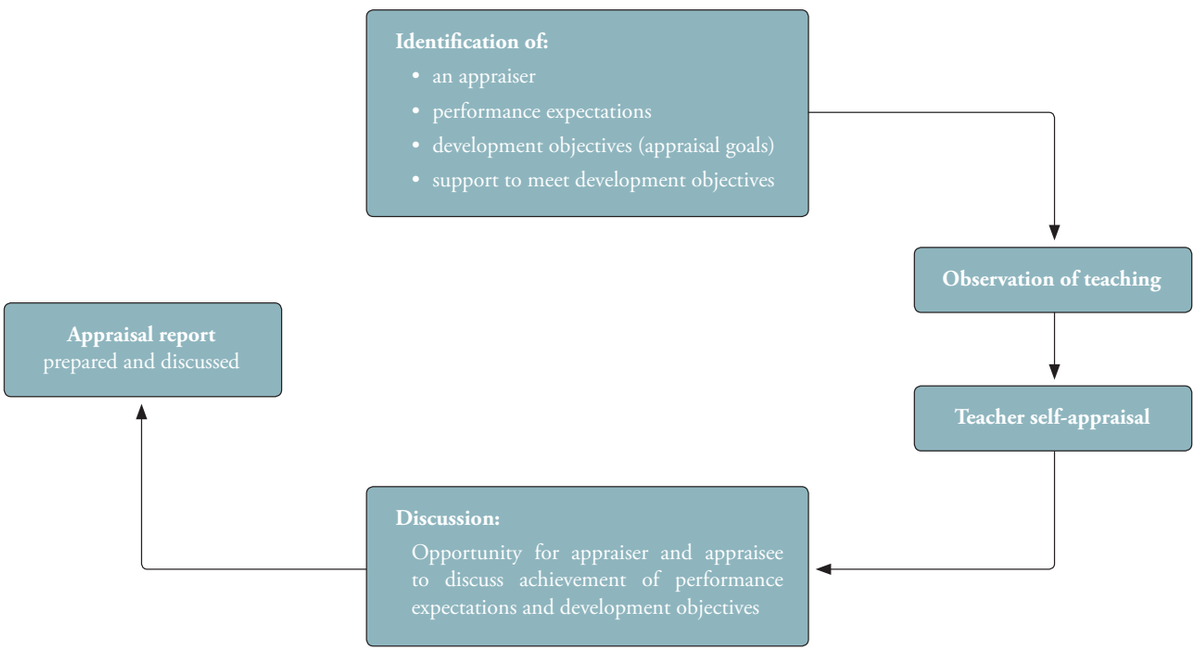
Teacher appraisal in New Zealand is a mandatory process internal to the school and must be completed once a year. Boards of trustees have flexibility in designing appraisal systems appropriate to their school within Ministry of Education guidelines as long as the system supports teachers in developing their professional career. The school keeps the appraisal records.

A recent OECD review of the New Zealand appraisal system found insufficient external input into teacher appraisal, and that the attestation process for registration was not sufficient for dealing with underperformance.[213]

Of concern also is Claire Sinnema's research that found appraisal seldom focused directly on student learning or outcomes. Fewer than 5% of teacher goals were related to student outcomes. Appraisal discussions had little reference to student learning data and typically focused on teacher practices without exploring connections between these practices and student learning. Goals were vague and not explicitly challenging.

[213] Ibid

Figure 13: Mandatory teacher appraisal processes in schools



Source: Sinnema, C. (2005). Teacher Appraisal: Missed Opportunities for Learning. *PhD Thesis.*

As well as the lack of links between teacher appraisal and student learning, appraisal varies greatly in New Zealand. Kane and Mallon found weaknesses in teacher appraisal and singled out the ad hoc nature of the process in New Zealand schools. A 2010 OECD review of the New Zealand system corroborated these findings: "Regular teacher appraisal processes as part of performance management appears still variable across schools".[214]

On the positive side, the appraisal process in New Zealand was praised for its well-established teaching standards, registration and teacher appraisal processes, link between good performance and career progression, and an emphasis on supporting beginning teachers.[215]

PLD

The MoE spends about $200 million per year on PLD (Office of the Auditor-General). While schools identify their own professional learning needs, the Ministry has also introduced an array of PLD initiatives over the last few years incorporating off-site one or two-day courses, conferences, post-graduate study, and in-school professional development.[216]

In 2011, the MoE introduced a contestable model for the provision of PLD to NZ schools. The level of funding did not change but the priorities for funding and the way PLD was allocated and contracted out changed, and is still changing.

The changes aim to provide high-quality, evidence-based PLD more directly targeted at raising student achievement, especially for the government's priority groups: Māori, Pasifika, students with special education needs, students from lower socio-economic areas, and boys.

Under these changes, the PLD provision aims to be more flexible and responsive to schools' needs. It also intended to have clear and measureable outcomes for students. The MoE is currently developing a system to evaluate the offered PLD. Up to now there has been little scrutiny of whether PLD leads to improved student learning.

Schools from 2013 will gradually be directly funded to purchase their own PLD when they prove they have systems in place to provide high quality outcomes for all their students. It will take time to fully implement this system. In the interim, the allocation of PLD will be brokered through regional or local offices of the Ministry.

There is little research evidence showing professional development improves teacher quality, largely because most professional development is based on the belief that teachers lack important knowledge. Such 'remedial' professional development courses may have made teachers more knowledgeable but not necessarily better in the classroom.

There is now a realisation of the need to change teachers' habits in the classroom rather than for them to simply acquire new knowledge. But changing teacher practice is not easy. In the United Kingdom, one initiative to improve this situation is the creation of school-based teacher 'learning communities' in which teachers report to colleagues about what they do in their classrooms to improve practice, hear about new ideas for improving practice, and commit themselves to specific improvements in their own practice. Schools involved in such learning communities have found remarkable improvements in teacher performance.[217]

A similar initiative in New Zealand is the 'best practice workshops'.

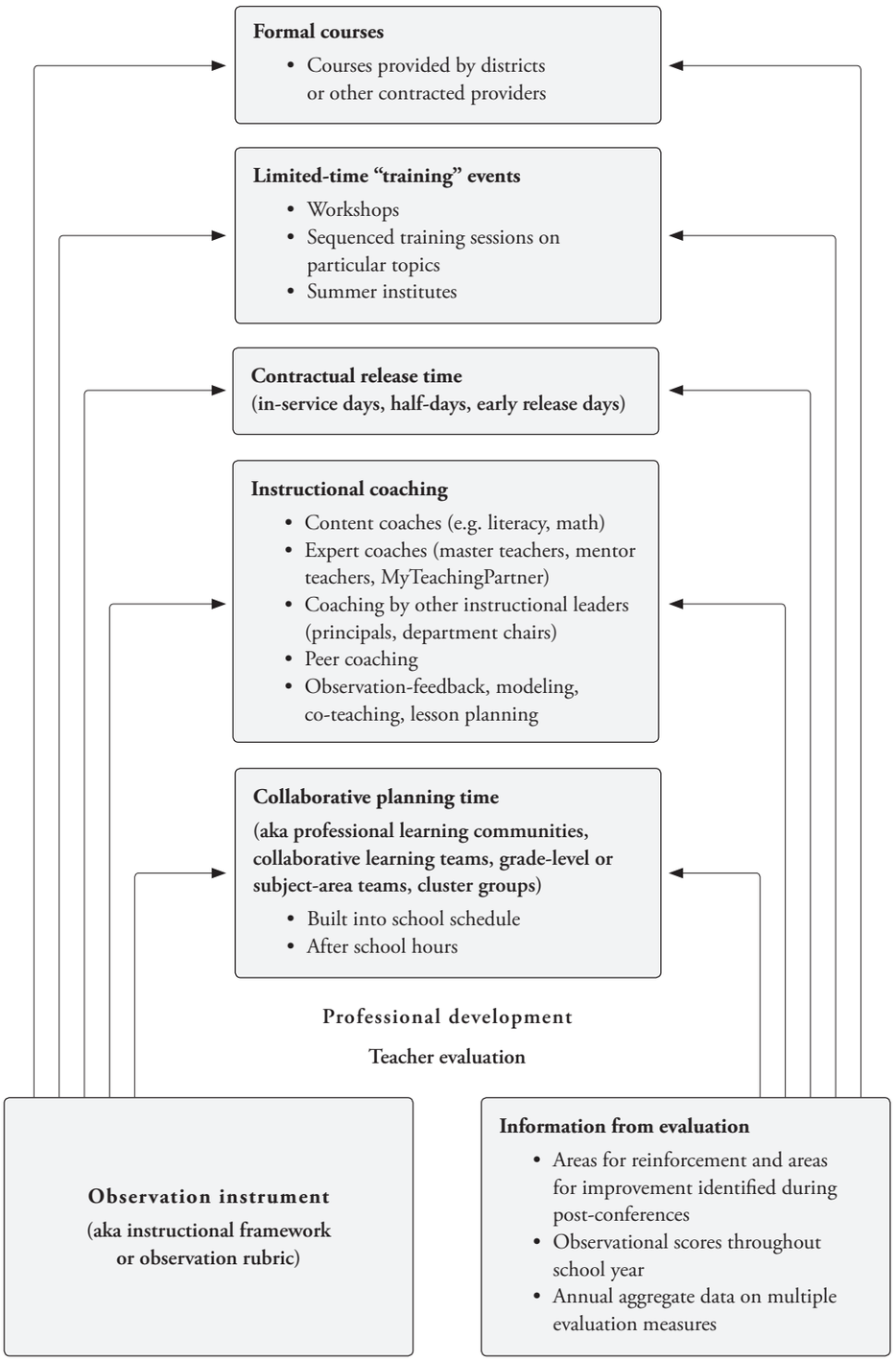
[214] Ibid, p. 77

[215] Ibid, p. 74-76

[216] Education Review Office. (2009). *Managing Professional Learning and Development in Secondary Schools*

[217] Wiliam, D. (2012). Teacher quality: Why it matters, and how to get more of it

Figure 14: Aligning evaluation and professional development



Source: Jerald, C. (2012). *Movin' It and Improvin' It,* Centre for American Progress, p. 24

Research overseas has revealed the importance of such learning communities in influencing individual teacher effectiveness.[218] [219] A complication, however, is that learning communities will not work if they are mandated or imposed from above. As Andy Hargreaves has pointed out, "collegiality cannot be contrived or forced".[220]

Research in Australia into learning communities noted that the most encouraging outcome is the extent to which dialogue about and focus on teaching quality has emerged and reinvigorated "jaded, mid-to-late career teachers".[221]

The OECD's review of New Zealand's appraisal system found that teacher appraisal, professional development, registration, and teacher career structures were disjointed.[222]

A major concern that OECD signaled, which was also recognised by the government's 2010 Workforce Advisory Group report, was the lack of a formalised career path for more effective teachers.

The appraisal process does not provide a means to formally reward teachers for gaining competencies and skills to take on higher responsibilities, hence "undermining the potentially powerful links between teacher appraisal, professional development and career development".[223] Kane and Mallon too noted this key point:

> In general, teachers feel there is little reward, beyond intrinsic, for taking on extra duties, managerial responsibilities, or for being successful in the classroom … and there is little confidence that current appraisal systems could adequately deal with poor performance.[224]

An evaluative framework that recognises, develops and rewards effectiveness in the classroom could reverse the signals being sent to prospective teachers that there is no reward for excellence. This can be a major deterrent to talented and ambitious graduates entering the teaching profession. (See Figure 14).

The ultimate goal for schools should be to replace haphazard and uncoordinated spending on PLD with deliberate investment in a coherent system for improving teacher effectiveness. Jerald summarises possible steps to achieve this in Figure 14.

Career pathways and pay

Teacher salaries are well above the New Zealand average. They begin at a point on the salary scale depending on a teacher's qualification, and there is a maximum point on the scale reached after six to eight years of teaching depending on qualification (Figure 16). It is essentially a lock-step model.

The starting salary for primary school teachers with a Bachelor of Teaching (the typical starting qualification) are $45,796, which goes up incrementally each year (almost automatically) to a maximum of $68,074 after eight years for a classroom teacher with no additional responsibilities.

The starting salary for secondary school teachers with a bachelor's degree plus a Graduate Diploma in Teaching (the typical starting qualification) is $47,400 and goes up to $71,900, at which point it stops after eight years of teaching.

Each year, teachers undergo the mandated appraisal process with school leadership. Virtually all teachers not at the top of the scale then move up one increment on the salary scale as long as they have met the standards in their

[218] Kilpatrick, S., Barret, M., & Jones, T. (2003). Defining Learning Communities. *Australian Association for Research in Education Conference*

[219] Voulalas, Z. S. (2005). Creating schools as learning communities: obstacles and processes. *Journal of Educaitonal Administration*

[220] Hargreaves, A. (1994). *Changing Teachers, Changing Times: Teachers' Work and Culture in the Post-Modern Age.* Teachers College Press

[221] Dinham, S. (2008). *How To Get Your School Moving and Improving.* ACER Press, p. 115

[222] OECD. (2010). OECD Review on Evaluation and Assessment Frameworks for Improving School Outcomes (New Zealand Country Background Report). Wellington: Ministry of Education

[223] Ibid, p. 79

[224] Kane, R. G., & Mallon, M. (2006). *Perceptions of Teachers and Teaching.* Wellington: Ministry of Education, p. ix

Figure 15: A hierarchy of actions to leverage "improvin' it" strategies.

Source: Jerald, C. (2012). *Movin' It and Improvin' It,* Centre for American Progress, p. 24

Figure 16: Teacher salary scales

Primary teacher salary scale minimum and maximum points by qualification level													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
$30,979	$32,327	$35,021	$37,715	$41,754	$45,796	$47,330	$49,164	$51,856	$56,177	$60,396	$65,396	$68,074	$71,900
Untrained		NQF5 (e.g. Diploma of Teaching)											
			NQF6 (e.g. Higher Diploma of Teaching)										
				NQF6 (e.g. Higher Diploma of Teaching)									
					NQF7 (e.g. Bachelor of Teaching)								
						NQF7 (e.g. Bachelor of Arts and Graduate Diploma of Teaching)							
							NQF8 (Honours degree)						
								NQF9 or 10 (Masters of Phd)					

Secondary teacher salary scale minimum and maximum points by qualification level									
T1	T2	T3	T4	T5	T6	T7	T8	T9	T10
$44,400	$46,000	$47,400	$49,400	$52,500	$55,900	$59,900	$65,145	$68,074	$71,900
NZQ7 (BTchg)		NQF7 (e.g. Bachelor of Arts and Graduate Diploma of Teaching)							
			NQF8 (Honours degree)						
				NQF9 or 10 (Masters or Phd)					

Source: Ministry of Education (2013). *Increments for Teachers*, Retrieved from http://www.minedu.govt.nz/NZEducation/EducationPolicies/SchoolEmployment/TopicsOfInterest/Increments.aspx, (September 4, 2013).

collective employment agreement. This renders the standards meaningless and does nothing to encourage and recognise excellence, while costing taxpayers $58 million every year. This problem isn't isolated to certain schools and, given that 99% of teachers progress annually, there is a culture of expectation that progression up the salary scale is automatic.

Principals have the option to award 'management units' (MU) to the value of $4,000 over and above a teacher's usual salary for management responsibility, recruitment, retention and reward. The units available to individual schools are role-related.

The units for primary schools were set up to remunerate those in leadership positions and "support career pathways for primary teachers".[225] New Zealand's devolved education system means that each school must develop its own policy with regard to unit allocation.

The MoE website reports that 43% of primary teachers and 47% of secondary teachers are allocated these units. Allocations range from one to nine. This means some schools can pay teachers up to 9 x $4,000 = $36,000 above the base salary. In addition, individual schools can supplement the number of units they are awarded by the Ministry from their own funds.

[225] Ministry of Education, New Zealand Educational Institute, NZSTA. (2010). Unit Allocation Guidelines

Performance pay

The link between appraisal and remuneration is a fraught one. Linking compensation to performance is intuitively powerful. Bill Gates, a substantial donor to United States education initiatives, pointed out:

> It's astonishing to me to have a system that doesn't allow us to pay more for someone with scarce abilities, that doesn't allow us to pay more to reward strong performance. That is tantamount to saying teacher talent and performance don't matter and that's basically saying students don't matter.[226]

A summary report of the 2005 OECD "Teachers Matter" report concluded:

> Each of the nations participating … was seeking ways to recognise expert teachers, reward them for their abilities, and take advantage of their skills. Creating a stronger connection between individual teacher contributions and what they are paid lies at the heart of redesigning teaching for the next generation.[227]

Despite this support for some form of performance pay, there is a lack of will in New Zealand to create financially rewarding career paths based on an increasing ability to teach well and thereby improve learning outcomes.

The teachers' collective contract and associated incremental pay scales send a strong message that teachers are only worth more each year for about eight years, and that the best thing for an ambitious teacher to do is move out of the classroom into senior management positions. In other words, there are few extrinsic incentives for teachers to show evidence of professional development and improved performance.

If performance pay ever becomes part of the New Zealand education system, it is more likely to have a positive impact if its development and operation are seen as a mutual responsibility between the MoE and the trade unions.

In line with this belief, researchers Ingvarson, Beavis & Kleinhenz concluded that performance pay schemes have a greater chance of success when:

- Their guiding purpose is to give substantial and valued recognition to teachers who provide evidence of professional development to high teaching standards (which includes evidence of student learning outcomes).
- Valid research-based standards have been developed by expert teachers in their specialist field of teaching to provide long-term goals for professional development.
- Appropriate research has been completed to develop reliable and valid procedures for gathering evidence to indicate whether teachers have met those standards.
- Assessments of performance procedures are conducted by an agency external to the school to ensure reliability, comparability and fairness.
- Teachers have adequate opportunities to learn the knowledge and skills required to put the standards into practice.
- Teachers' ability to demonstrate meeting relevant standards leads to valued professional recognition, enhanced career opportunities, and significant salary increases.

[226] Whelan, F. (2009). *Lessons learned: How gooed policies produce better schools,* p. 118

[227] The Aspen Institute (n.d.) *Teaching Policy to Improve Student Learning: Lessons from Abroad,* p. 5

- Teachers who reach high standards of performance gain access to interesting, challenging and well-supported positions in schools where they can provide leadership to improve teaching and learning.
- Government and employing authorities become convinced that the assessment system is valid and reliable and make long-term commitments to support the system.[228]

An interesting development in the primary school sector in New Zealand is the recent announcement by the primary teachers' union, the NZEI. Exceptional primary school teachers will be recognised with the introduction of a new teaching category – the Classroom Expertise Teacher (ACET) allowance. From 2015, up to 800 primary school teachers will gain an extra $5,000 on top of their regular salary for achieving this status.

How teachers qualify for this allowance is yet to be decided – it may be worthwhile for the NZEI to look overseas for successful models and consider Ingvarson's suggestions listed above. Indeed, that this arrangement is the result of collaboration between the union and the MoE shows what sensible consultation can achieve.

Performance pay problems are not likely to disappear soon. Perhaps it is time for teaching to take on the trappings of a true profession in which excellence is valued and rewarded, and the government, working alongside the unions, enables this by creating conditions of flexibility in teacher employment.

An OECD report sums up the vital relationship between the government and the unions:

> Indeed, the higher a country is on the world's education league tables, the more likely that country is working constructively with its unions and treating its teachers as trusted professional partners…[229]

Demographics of the teaching workforce

> A much greater effort would seem to be called for to attract young graduates into the teaching profession – it is dying of old-age! (Harker & Chapman)[230]

The Age Structure

Figure 17 shows the ageing teaching workforce[231] by comparing the age distribution between 2004 and 2012. In 2004, the proportion of teachers aged 55 and over was one in six (15%). By 2012, it had risen to over one in five (22%).[232]

This is consistent with trends predicted by the Ministry of Business, Innovation and Employment. The proportion of the labour force aged 55 and over was one in six in 2007, and predicted to rise to one in four by 2020.[233] The problems of an ageing workforce are not specific to teaching.

Longer life spans, falling birth rates, and the ageing baby boomer cohort are underlying a global trend in ageing populations and the teaching profession is by no means immune to those general trends.[234]

[228] Ingvarson, L., Beavis, A., & Kleinhenz, E. (2007). Factors affecting the impact of teacher education programmes on teacher preparedness: implications for accreditation policy. *European Journal of Teacher Education, 351-381, p. 17*

[229] OECD. (2010). *Strong Reformers in Education: Lessons from PISA for the United States.* OECD, p. 240

[230] Harker, R., & Chapman, J. (2006). Teacher Numbers in New Zealand: Attrition and Replacement. *New Zealand Journal of Teachers' Work*

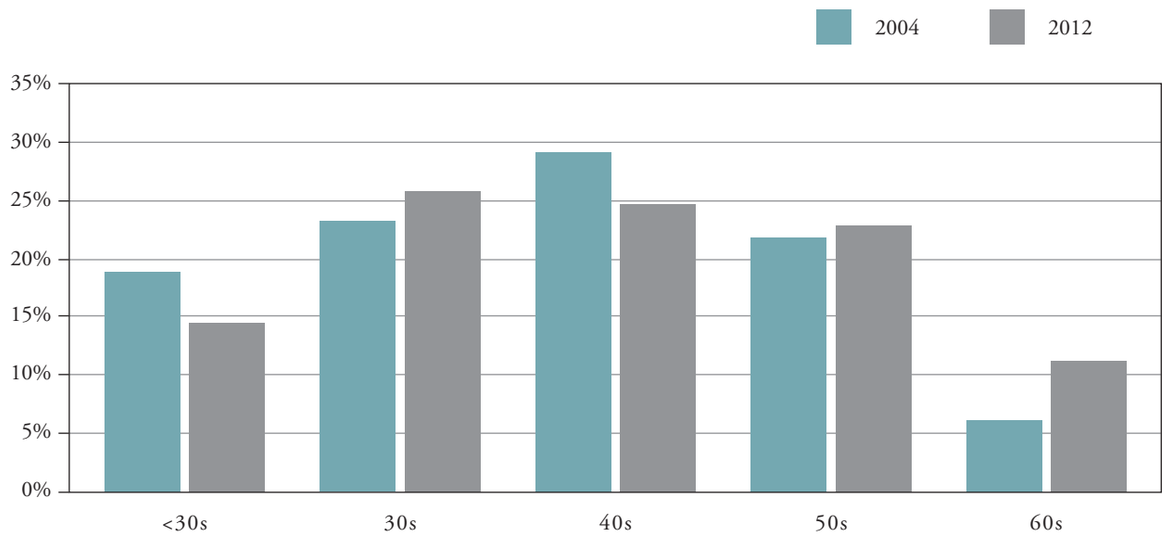
[231] The website www.educationcounts.govt.nz presents data on teaching staff collected from pay roll data, which breaks data by 'designation' e.g. teacher, middle management, resource teacher, principal, etc. For the purpose of this analysis, only the category 'teacher' was considered

[232] Ministry of Education (2013). Education Counts: Teaching Staff, Retreived August 5, 2013, from http://www.educationcounts.govt.nz/statistics/schooling/teaching_staff

[233] Department of Labour. (2009). *Understanding the Job Mobility and Employability of Older Workers.* Wellington

[234] Alpass, F., & Mortimer, R. (2007). *Ageing Workforces and Ageing Occupations: A Discussion Paper.* Wellington: Department of Labour

Figure 17: Age distribution of teaching workforce in 2004 and 2012



Source: Ministry of Education (2013). Education Counts: Teaching Staff, Retreived August 5, 2013, from http://www.educationcounts.govt.nz/statistics/schooling/teaching_staff

There are two major implications of the greying teaching workforce: teacher shortages as teachers move into retirement and adapting to an older workforce.

A significant proportion of teaching workforce is nearing retirement age, but it is difficult to know how many will stay in work and how many will retire. New Zealand has no formal retirement age, and the average length of working lives is increasing.[235]

The Ministry of Business, Innovation and Employment estimated that 50,000 people will retire every year from 2011 to 2016, with only 118,000 people entering the workforce in that five-year period. There are indications that working lives may however be extended. Only 20% to 30% of New Zealanders intend to retire completely, i.e. do any paid work, and on average expect to work 15 hours per week.[236] New Zealand has a greater proportion of older people in the workforce compared to other countries.

Workers now have to continuously up-skill to have necessary knowledge, skills and ability to remain current, but there is evidence showing that older workers are less likely to engage in training and development compared with younger workers. "Countries with cultures of lifelong learning have fewer age differences in training participation rates".[237]

As noted, New Zealand's compressed salary scale for teachers means that a 55-year-old teacher who may not be planning to retire for another 10 or 15 years might have reached this plateau 25 years ago. "Reaching a higher wage plateau combined with a shorter remaining payback period may make the employee more reluctant to consider updating their job-specific skills at higher ages".[238]

[235] Department of Labour. (2009). *Understanding the Job Mobility and Employability of Older Workers.* Wellington

[236] McPherson, M. (n.d.). *Older Workers: Challenging Myths and Managing Realities.* Auckland: Equal Employment Opportunities Trust

[237] Ibid, p. 97

[238] Department of Labour. (2009). *Understanding the Job Mobility and Employability of Older Workers.* Wellington, p. 15

The Gender Imbalance

In 2012, three-quarters (76%) of teachers were female and only one-quarter (24%) male. This imbalance has not changed since 2004. The gender split is more pronounced in primary schools. In 2012, 86% of teachers in primary schools were female compared to 14% male,[239] but 60% of teachers in secondary school were female and 40% male.

Governments in North America, Europe and Australasia have tried dealing with the dearth of men in teaching, as the feminisation of teaching has been blamed for boys' relative underperformance in schools.[240]

According to Hill, male teachers are needed to demonstrate to boys that learning is not just for girls, and boys need good male role models and masculine authority figures.[241] A popular notion is that feminisation of the teaching workforce has meant that curriculum and teaching methods tend to favour girls.[242] These arguments have also been put forward in New Zealand.[243]

However, there is little conclusive empirical research to support this claim.[244] Regardless of the evidence, perceptions affect reality. If parents perceive that having male teachers for their sons will make a difference to their education, this may affect their school choice, putting pressure on principals to hire male teachers and increasing demand for male teachers in general. This demand flows through to teacher training institutes that actively recruit for male student teachers.

Again what matters is the quality, not gender, of teachers. One argument is that boys are more susceptible to poor quality teaching than girls.[245] Others have argued that teachers need to have equally high expectations of boys and girls, and adapt their teaching methods to engage both genders.[246]

Ethnicity

The majority of the teaching workforce identifies as New Zealand European/ Pākehā (73%), with 9% Māori, 3% Pasifika, 4% Asian, and 4% other.[247]

In contrast, the student population is made up of 53% New Zealand European/ Pākehā, 38% Māori, 16% Pasifika, 15% Asian, and 1% other.[248] Like the demand for men in teaching, there is a demand for Māori and Pasifika teachers in New Zealand.

[239] For the purpose of this analysis, 'primary' includes *full primary* (years 1-8), *contributing primary* (years 1-6) and intermediate (years 7-8), and 'secondary' includes *secondary* (years 9-15). For the purpose of a clean comparison of the gender balance of teachers in the primary compared with secondary teaching workforce, *composite* (years 1-13), *secondary* (7-15), *special* and *correspondence* schools were excluded from analyses.

[240] Shelton, F. (n.d.). *Too Cool for School? Why Are Our Boys Not Achieving?*

[241] Hill, D. (2006, November 15). A man's touch: We need more men teaching in schools. But what sort of men and why? *The Guardian*

[242] Shelton, F. (n.d.). *Too Cool for School? Why Are Our Boys Not Achieving?*

[243] Buckingham, J. (n.d.). Let's make a start to fix boy troubles. *New Zealand Herald*

[244] Shelton, F. (n.d.). *Too Cool for School? Why Are Our Boys Not Achieving?*

[245] Buckingham, J. (n.d.). Let's make a start to fix boy troubles. *New Zealand Herald*

[246] Shelton, F. (n.d.). *Too Cool for School? Why Are Our Boys Not Achieving?*

[247] Ministry of Education (2013). Education Counts: Teaching Staff, Retreived August 5, 2013, from http://www.educationcounts.govt.nz/statistics/schooling/teaching_staff

[248] These calculations use 'prioritised ethnicity' meaning that if someone identifies as Māori and New Zealand European, they are classified as Māori. The priority order is Māori, Pacific, Asian, European/ Pākehā and Other

Conclusion

Teachers matter a great deal. Having a good teacher rather than a mediocre or poor teacher makes a big difference. Strengthening the teaching profession in New Zealand so that all students have a quality teacher in every classroom is not a simple task. The overall effectiveness of the teaching workforce depends on many variables.

Some of the concerns highlighted in this report are difficult to overcome but need to be faced for the teaching profession to become a high status and effective profession that attracts the best and brightest into the classroom. Key concerns are:

- maintaining a good supply of quality teachers, especially in high demand subjects
- high rates of teacher attrition, especially among new teachers
- limited ability to recognise and reward expert teachers
- inequitable distribution of teachers among schools, especially in low-decile areas
- qualitative shortfalls especially in science and mathematics in primary school
- low image and status of teaching as a profession
- changing composition of the teaching workforce: fewer top-tier graduates and decline in number of male teachers
- limited connections between ITE, PLD and schools' needs
- high and growing workloads, low job satisfaction, and declining morale
- oversupply of teachers in some subject areas

Policy initiatives tackling these concerns will be studied in the third report of this series.

It is time that government and education bureaucrats faced up to the realisation that teachers do matter more than any other thing in terms of their impact on improving student achievement, and thus focus their attention on this key area.

In recent times, schools have been inundated with a plethora of education reform initiatives, and too many schools with best intentions try to embrace them all hoping for a positive impact on achievement. But, as Wiliam and other researchers note, the recent grand reform measures have proved to be remarkably unsuccessful.

The irony is that we know what works. Strengthen the teaching workforce. Create a culture within the profession of continuous improvement. Signal to the top graduates coming out of university that "teaching is a job that smart people do … [because] we need people who are drawn to the profession not because it is easy, but because it is hard".[249]

[249] Wiliam, D. (2012). Teacher quality: Why it matters, and how to get more of it, p. 6

Appendix

Source: Education Counts.

Outline of the NZ schooling system

Under the *New Zealand Education Act* 1989, schooling is compulsory for citizens and residents between the ages of six and 16, but most students start school following their fifth birthday and can continue until 19 years of age.

The New Zealand schooling system is loosely divided into two parts: primary education for students aged five to 13 years old (Year 1 to Year 8), and secondary education for students aged 13 to 18 (Year 9 to Year 13).

Primary schooling

Three types of school cover the primary school age range: contributing schools (Years 1 to 6); full-primary schools (Years 1 to 8 – mainly in rural areas with no intermediate schools); and intermediate schools (Years 7 and 8).

Two types of school overlap the primary/secondary school age range: composite schools (Years 1 to 13 – mainly found in isolated rural areas) and middle schools or junior high schools (Years 7 to 10 – a recent development.

Figure 18: Structural features of the New Zealand schooling system

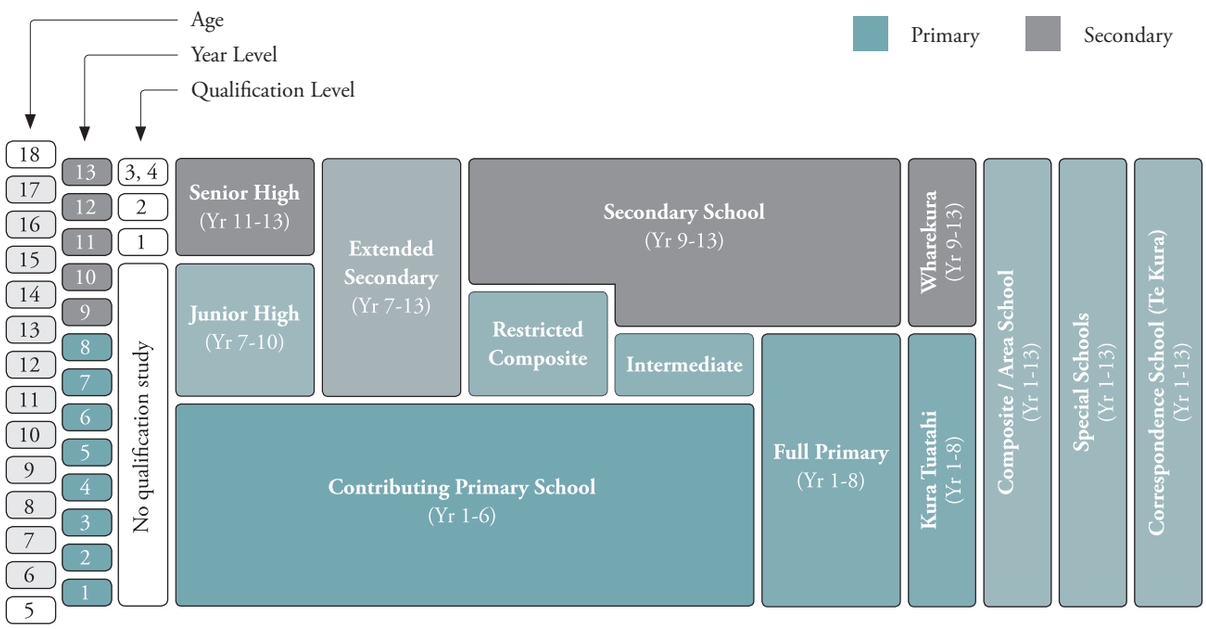


Table 7: Balance of provision in New Zealand at 1 July 2009

Type of school	Number of schools	Number of students
State schools	2,137	645,052 (85%)
State-integrated schools	327	85,433 (11%)
Private schools	96	30,374 (4%)
Total system	**2,560**	**760,859 (100%)**

Secondary schooling

The schooling options that cover the secondary school age range continue to evolve: secondary schools (Years 7 to 13); secondary schools that (Years 9 to 13 – the most common form); and senior high schools (Years 11 to 13 – a recent development).

Provision of education

New Zealand provides a free education system through state-owned and operated schools. However, both state-integrated and private options exist (Table 7). State-integrated schools are state schools with a defined special character (usually religious) and owned by independent proprietors who have the right and responsibility to maintain the special character.

A new government initiative will possibly create up to 6 Partnership Schools in 2014 modelled on the 'free schools' and 'charter schools' in Europe and the United States, respectively.

Division of responsibility

Compared to other OECD countries, New Zealand's school system is characterised by a high level of devolution. Prior to 1989, primary schools were governed at a district level by regional education boards supported by central regulation and funding. This model came under sustained critique in the mid-1980s. The system was seen by many as inflexible, overly bureaucratic, and lacking responsiveness to the needs of students and local communities.

The *Tomorrow's Schools* (1988) reforms dismantled regional education boards. Policy decisions were centralised and responsibility for the administration and management of individual schools was placed with Boards of Trustees. Self-managing schools, governed primarily by parents and competing for students, were expected to foster better teaching and learning and a higher performing education system.

Agencies and parties within the New Zealand schooling system include:

- Ministry of Education
- Education Review Office
- New Zealand Qualifications Authority
- Tertiary Education Commission
- New Zealand Teachers Council
- New Zealand Career Services.

The Ministry of Education agrees with the Minister of Education the work that it will perform over the next five years and the funding available. This is set out in the annual Statement of Intent (SOI). The Ministry of Education reports annually to Parliament against the SOI.

The regulatory framework for schools' accountabilities is provided by the National Education Guidelines (NEGs) and the National Administration Guidelines (NAGs).

The NEGs have five components:

- National Education Goals
- Foundation Curriculum Policy Statements
- National Curriculum Statements
- National Standards
- National Administration Guidelines.

The NAGs outline requirements related to:

- providing teaching and learning programmes (NAG 1)
- planning, self-reviewing and reporting (NAG 2)
- employing and managing personnel (NAG 3)
- managing finances and property (NAG 4)
- providing a safe physical and emotional environment (NAG 5)
- other legislative requirements including attendance and the length of the school day and year (NAG 6).

State schools are governed by a Board of Trustees elected by parents and staff every three years and comprise five or six elected parents, the principal, a staff member, and a student representative in secondary schools. Boards can co-opt/appoint additional members but cannot exceed the number of parent representatives.

New Zealand's self-managing schools have a number of strengths, including being flexible and enabling innovative local practice. Teachers have a high degree of professional autonomy. The New Zealand curriculum allows for considerable flexibility, specifying expected learning outcomes rather than prescribed content to be taught. It is expected that teachers will analyse students' needs, select teaching strategies, source teaching materials aligned with the national curriculum, and work with individuals or groups of students in a responsive way.

Self-managing schools create some challenges for system evaluation and assessment. Expectations and demands on school principals and Boards of Trustees are also high. Schools can struggle in low socioeconomic status or small rural areas, where the pool of possible trustees is quite small and skills or experience may be limited.